

S 1962

H47

Copy 1

TS 1962
H47

**SECRETS
OF
MEAT CURING
AND
SAUSAGE MAKING**

Packing House Experts



We have been consulting chemists for large packers for many years. Our advice in the handling of meats has saved packers many thousands of dollars. We offer our services to those interested.

Analytical and Consulting Chemists

We make a specialty of both synthetic and analytic chemistry. Our large clientele will find us ready to continue our services as heretofore.

ANALYSES GIVEN CAREFUL ATTENTION
GENERAL SYNTHESSES A SPECIALTY

B. Heller & Co.,
Chemists,
Chicago, U. S. A.

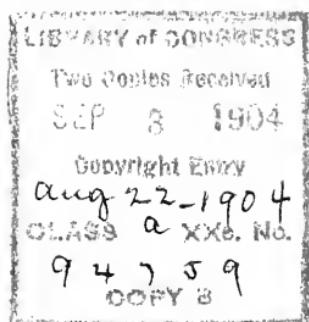
Secrets of
**MEAT CURING
AND
SAUSAGE MAKING**

*How to Cure
Hams, Shoulders, Bacon,
Corned Beef, Etc.*

*How to Make
Sausage, Etc.*

1574

B. H E L L E R & C O.,
MANUFACTURING CHEMISTS
CHICAGO, U. S. A.



COPYRIGHT 1904.
B. HELLER & CO.,
CHICAGO. U. S. A.
ALL RIGHTS RESERVED.
REPRINTS AND EXTRACTS FORBIDDEN.

q11753 31

B. HELLER & CO., CHEMISTS, CHICAGO.

INDEX.

	PAGE
Absorbent for Bologna, Frankforts and Pork Sausage,	88
Bacon, Directions for Curing	21
Bacon, How to Keep for a Year or Longer	43
Barreled Pork, Description of	44
Barreled Pork, Need not be Overhauled	46
Barreled Pork, How to Cure	45
Barreled Pork, Temperature for	47
Beef Cheeks, Curing for Bologna	60
Beef Cheeks, Directions for Dry Salting	61
Beef Cheeks, How to Cure for Canning	49
Beef Hearts, Curing for Bologna and Sausage	62
Beef Livers, How to Cure	51
Beef Tongues, How to Cure	47
Beef Trimmings, Directions for Salting	59
Beef Trimmings for Bologna, Curing and Preserving,	59
Beef Trimmings, Temperature of Cooler for	60
Berliner Konservirungs-Salze, Rudolph Gebhard's, Rosaline and White	86
Binder for Bologna, Frankforts and Pork Sausage,	88
Blender for Bologna, Frankforts and Pork Sausage,	88
Blood Sausage, Directions for Making	73
Blood Sausage, Directions for Making Tongue	75
Bologna, How to Make	64
Bologna, How to Add Water to Bologna Meat while Chopping	66
Bologna, Curing Beef Cheeks for	60
Bologna, Curing Beef and Pork Hearts for Bologna and other Sausage	62
Bologna, Curing and Preserving Beef Trimmings for	59
Boneless Hams, Directions for Curing lean Butts for	52
Braunschweiger Liver Sausage	72
Brine, Using Twice	37
Brine, Temperature	37
Brine, Boiling	41
Brine Absorbs Foreign Odors	42
Bull Meat Flour	88
Butts, Directions for Curing Lean	52

Index Continued.

	PAGE
Chill Room,	7
Chilling Meats,	29
Corned Beef, Directions for Curing	22
Corned Beef, Garlic Flavored	24
Corned Beef, Galvanized Iron Curing Tanks	23
Corned Beef, When not Fully Cured	24
Curing Beef and Pork Hearts for Bologna, etc.	62
Curing Meat, Secret is in the Handling	7
Curing Meats, General Hints,	29
Curing Packages,	41
Cutting the Hind Shank Bone	8
Dried Beef, Directions for Making	25
Dried Beef, How to Keep for a Year or Longer	43
Dry Salt Curing with no Ice Machine	40
Dry Salt Meats	38
Dry Salt Meats, How to Cure	39
Flavor for Corned Beef, Tongues, etc.,	90
Flavor for Hams, etc.,	91
Frankfort Sausage, Directions for Making	66
Freeze-Em	85
Garlic Flavored Tongues	48
Garlic, Vacuum	90
Ham Smoke, Zanzibar Liquid	91
Hams, Begin the Curing in the Hog Pen	8
Hams, Condition of the Meat When Curing	9
Hams, Cooked, How to Give them a Smoked Flavor	84
Hams, Directions for Curing	13
Hams, Directions for Curing Lean Butts for Boneless	52
Hams, How to Cure in Open Barrels	14
Hams, How to Overhaul Hams when Curing in Open Packages	15
Hams, How to Cure in Closed up Tierces	15
Hams, Lunch	56
Hams, New England Pressed	56
Hams, New England Pressed, How to Make	58
Hams, Quantity of Brine for 100 lbs. of Hams	14
Hams, Rolled Boneless, or Ham Sausage	56
Hams, Shoulders, Bacon, Dried Beef and all Kinds of Pickled Meats, How to Keep for a Year or Longer	43
Head Cheese, Directions for Making	69
Head Cheese, How to Cure Meat for	68
Hog Livers, How to Cure	51
Hog Tongues, How to Cure	49

Index Continued.

	<small>PAGE</small>
Holstein Sausage, How to Make.....	78
Hydrometers	93
Introductory and Guaranty	11
Italian Salami Sausage	77
Lard Purifier,	92
Liver Sausage, Braunschweiger, How to Make	72
Liver Sausage, Directions for Making	70
Meats, Begin Curing in the Pen.....	8
Meats, Boiling the Brine for	41
Meats, Brine on Meats Absorbs Foreign Odors	42
Meats, Chilling.....	29
Meats, Cleansing Curing Packages for.....	41
Meats, Directions for Pumping.....	32
Meats, Drip Ice Water Should Never be Used in Pickle for.....	37
Meats, Drippings from Refrigerating Pipes on	42
Meats, General Hints for Curing	29
Meats, How to Purify Air in Meat Coolers.....	42
Meats, Overhauling	30
Meats, Packing in Tierces	33
Meats, Secret of Curing is in the Handling	7
Meats, Smoke Flavor for	44
Meats, Smoking	44
Meats, Temperature for Curing	35
Meats, Temperature of Brine for	37
Meats, Using Brine Twice for	37
Meats, Washing Cured Meats before Smoking	43
Overhauling Meats	30
Ozo Antiseptic Washing Powder	89
Pickled Meats, How to Keep a Year or Longer	43
Pickled Pigs Feet	81
Pickled Pigs Feet, Mixed Spice for.....	82
Pickled Pigs Tongues.....	83
Polish Sausage, Directions for Making	79
Pork Hearts, Curing for Bologna, etc.	62
Pork Sausage, Directions for Making.....	68
Pumping Meats	30
Pumping Pickle for Meats	32
Pumping Pickle for Livers.....	51
Rolled Boneless Hams or Ham Sausage	56
Rudolph Gebhard's Berliner Konservirungs- Salze Rosaline and White.....	86
Salami Sausage, Italian.....	77
Salometers	93
Salt Hydrometers	93

Index Continued.

	PAGE
Salze, Rudolph Gebhard's Berliner Kon- servirungs, Rosaline and White	86
Sausage, Bologna	64
Sausage, Braunschweiger	72
Sausage, Cervelat	76
Sausage, Frankfort	66
Sausage, Ham	56
Sausage, Holstein	78
Sausage, Italian	77
Sausage, Liver	70
Sausage, Polish	79
Sausage, Pork	68
Sausage, Salami	77
Sausage, Summer	76
Sausage, Swedish	79
Sausage, Wooden Tanks better than Iron Tanks for Boiling	67
Scalding Hogs, Temperature for	84
Shoulders, Begin the Curing in the Hog Pen ..	8
Shoulders, Condition of the Meat for	9
Shoulders, Directions for Curing	17
Shoulders, How to Cure in Open Barrels	18
Shoulders, How to Cure in Closed Up Tierces ..	20
Shoulders, How to Keep for a Year or longer ..	43
Shoulders, How to Overhaul when Curing in Open Packages	19
Shoulders, Quantity of Brine for 100 lbs	19
Smoke Flavor	44
Smoking	44
Souse, Directions for Making	80
Stearin Purifier,	92
Sugar, Test for Pure	34
Sugar, Use only Pure	33
Summer Sausage, Directions for Making	76
Tallow Purifier,	92
Temperature for Curing Meats	35
Thermometers, Boiling,	94
Thermometers, Cold Storage	96
Thermometers, Meat Testing	95
Vacuum-Garlic	90
Vats, Shape of	15
Zanzibar Carbon	87
Zanzibar Liquid Ham Smoke	91

The Secret of Curing Meat is in the Handling.

Success in curing meat depends largely upon the handling before and while it is being cured. Every detail should be so closely watched and carried out, that the spoilage will be reduced to a minimum.

After hogs are killed, scalded and scraped, they should be dressed as quickly as possible, washed cut thoroughly with clean water, then split and allowed to hang in a well ventilated room where there is a free circulation of pure, fresh air; they should be allowed to thus hang until partly dried off, and until a portion of the animal heat has escaped from the meat. They should then be run into a cooler or chill room, and the quicker the temperature is reduced to 32 or 34 degrees Fahrenheit, the better; if the chill room is properly constructed, the meat should be entirely chilled in 24 hours, except for very heavy hogs, which will require a little longer. If the hogs are properly chilled, the temperature of the inside of the ham or shoulder will not be more than one to one and one-half degrees higher than the cooler.

The Chill Room.

Many chill rooms are not properly built. There should be at least from 24 to 36 inches of space between the ceiling of the chilling room and the gamble stick, or more if possible, in order to enable the shanks to become thoroughly chilled. The animal heat which leaves the carcass, naturally rises to the top of the cooler and unless there is space between the ceiling and the top of

B. HELLER & CO., CHEMISTS, CHICAGO.

the hog, the heat will accumulate in the top of the cooler where the temperature will become quite warm; this will prevent the marrow in the shank and the joints from becoming properly chilled. It is this fact which accounts for so much marrow and shank sour in hams.

Cutting the Hind Shank Bone.

We advise the cutting of the hind shank bone after the hog is dressed, so as to expose the marrow. It is the best thing to do, as it helps to chill the marrow. The chunk of meat that is usually left on the hind foot above and next to the knee, if cut loose around the knee, will be drawn to the ham, and when chilled, will remain on the ham instead of being on the hind foot. After the meat is cut, the bone can be sawed in the same place where the hock would be cut from the ham later. The hog will hang on the sinew the same as if the bone is not sawed, except that the cut bone separates and exposes the marrow so it can be properly cooled. On heavy hogs, this is quite a gain, as the chunk that would remain on the foot would be of little or no value there, but when left on the ham, sells for the regular ham prices.

Begin the Curing of Meat in the Pen.

Thousands of pounds of hams, shoulders and sides are spoiled annually before the hog is killed. Overheated hogs, or hogs that are excited from overdriving should never be killed until they are cooled off or have become perfectly quiet. When the temperature of a hog is above normal, the

B. HELLER & CO., CHEMISTS, CHICAGO.

meat always becomes feverish. This is especially true of large fat hogs, and when the meat becomes feverish, it will never cure properly, but nine times out of ten will sour. The meat of feverish hogs can never be chilled as it should be, and unless the meat is properly chilled, it cannot be properly cured. Before hogs are killed, they ought to be driven into a cool place and if necessary, sprayed with cold water until they are thoroughly cooled off. This precaution is necessary only in hot weather; in winter, they simply need plenty of rest.

If it is necessary to hold the hogs for several days in the pen before they are killed, they should have an abundance of water and also a little feed. This prevents shrinkage and will also keep them from getting nervous from hunger.

Condition of the Meat.

When cured meat turns out bad, it is not always the fault of the man who has charge of the curing so much as it is the condition the meat was in when put into the brine to cure. Good results should not be expected from a man who has charge of the curing unless the meat is delivered to him in proper condition. Hogs should never be killed the same day of purchase at the Stock Yards or from the farmer. They ought to remain in the packing house pen for at least 24 hours before killing. If different lots of hogs are mixed together, they will sometimes fight which greatly excites them. Whenever they show this fighting disposition, they should be separated.

FREEZE-EM-PICKLE

A PREPARED SWEET PICKLE
FOR CURING and PRESERVING

Hams, Bacon, Shoulders Corned Beef, etc.

Produces an Excellent Sweet Flavor
CURES MEAT SO IT WILL NOT SPOIL

Meat cured with it, when cut and exposed to the
air on the counter, retains its
beautiful color.

Guaranteed to Conform to all
Pure Food Laws.

KEEPS BRINE
and MEAT **FRESH**

This booklet tells you how to cure meats. Its
information is very valuable to you.

If you are a curer of meats, and well experienced,
it will give you many points that will
prove of great assistance and save you money.

If you are inexperienced, it will make you
practical and fully capable of curing your own
meats even better than you could learn to cure
them by years of experience.

B. HELLER & CO.
Manufacturing Chemists  CHICAGO, U. S. A.

FREEZE-EM-PICKLE

A Wonderful Discovery.



BACTERIAL action causes great annoyance and loss to curers of meat, and a practical means of prevention has long been sought. As the result of a lengthy series of costly experiments, we have succeeded in discovering a new Pickle which by acting the same as freezing, prevents bacterial development in the meat and brine. We have, therefore, named this important discovery Freeze-Em-Pickle. It keeps the brine and the meat in as fresh a condition as if frozen, and it cures Hams, Bacon, Shoulders, Dried Beef and Corned Beef better than can be done by any other method.

It congeals the albumen so that it does not draw out of the meat into the brine, while it maintains in the meat all the natural flavor, making it far more palatable and digestible. Freeze-Em-Pickle when dissolved in water makes a decidedly sweet brine which will cure Hams, Bacon, Shoulders, Corned Beef, Dried Beef, etc., with a most delicious flavor, without the loss or spoiling of a single piece. The meat will not be salty, but will have that peculiar sugar-cure flavor which is so much liked by everyone. It makes the curing of meats very simple and easy. By the use of Freeze-Em-Pickle anyone can make the finest cured meats, whether or not, they have

B. HELLER & CO., CHEMISTS, CHICAGO.

ever had any previous experience in the curing or handling of meats.

Packers, Butchers and Curers have many difficulties in turning out good, sweet-pickle cured meat, owing to their inability to obtain the proper curing ingredients. Besides, their methods of curing are frequently incorrect and unscientific.

Our Guaranty.

We guarantee that Freeze-Em-Pickle does not contain anything that is the least injurious to health, and that it conforms to all the requirements of German and American Pure Food Laws. That meats cured with Freeze-Em-Pickle will have a better flavor and a milder and sweeter cure, and will not be as salty as meat that has been cured in the regular way. Furthermore, that meats cured with Freeze-Em-Pickle will positively be more palatable, better in taste, and will give better satisfaction in every respect, than meats cured by any other method, and the loss by spoiled or soured meats will be wholly unknown.

B. Heller & Co.

B. HELLER & CO., CHEMISTS, CHICAGO.

DIRECTIONS FOR CURING HAMS.

Observe the following proportions to get the best results in curing Hams with Freeze-Em-Pickle.

SMALL HAMS 8 TO 14 LBS. AVERAGE:—

Use for 100 lbs. { 9 lbs. of Common Salt.
Small Hams. { 1 lb. of FREEZE-EM-PICKLE.
{ 2 lbs. of Granulated Sugar.
{ 5 gals. of Cold Water.

Cure in this brine 50 to 60 days.

MEDIUM HAMS 14 TO 18 LBS. AVERAGE:—

Use for 100 lbs. { 10 lbs. of Common Salt.
Medium Hams. { 1 lb. of FREEZE-EM-PICKLE.
{ 2 lbs. of Granulated Sugar.
{ 5 gals. of Cold Water.

Cure in this brine 60 to 70 days.

HEAVY HAMS 18 TO 24 LBS. AVERAGE:—

Use for 100 lbs. { 11 lbs. of Common Salt.
Heavy Hams. { 1 lb. of FREEZE-EM-PICKLE.
{ 2 lbs. of Granulated Sugar.
{ 5 gals. of Cold Water.

Cure in this brine 75 to 80 days.

FIRST.—Sort the Hams, separating the Small, Medium, and Large.

SECOND.—Take enough of any one size of the assorted Hams to fill a tierce which will be 285 lbs.; then thoroughly mix together in a large pail or box, the following proportions of Freeze-Em-Pickle, Sugar and Salt.

Use, for 285 lbs. of Small Hams, 3 lbs. of Freeze-Em-Pickle, 6 lbs. of best Granulated Sugar and 27 lbs. of Salt.

For 285 lbs. of Medium Hams, 3 lbs. of Freeze-Em-Pickle, 6 lbs. of best Granulated Sugar and 30 lbs. of Salt.

For 285 lbs. of Heavy Hams, 3 lbs. of Freeze-Em-Pickle, 6 lbs. of best Granulated Sugar and 33 lbs. of Salt.

How to Cure Hams in Open Barrels.

When the tierces or barrels in which these Hams are cured, are not to be headed up, but are left open, use half of the Freeze-Em-Pickle, Sugar and Salt, for rubbing as follows:

FIRST.—Rub each Ham well with some of the mixture of Salt, Sugar and Freeze-Em-Pickle. Sprinkle a little of the mixture in the bottom of the tierce.

SECOND:—Pack the hams in a perfectly clean tierce. The mixed Freeze-Em-Pickle, Sugar and Salt that is left after rubbing, should be used for making the brine. It will require 15 gallons of brine for each tierce of Hams. Make the brine by dissolving in cold water, all the mixed Freeze-Em-Pickle, Sugar and Salt that is left after the Hams are rubbed. Stir well for a minute until it is dissolved, then pour this brine over the meat. When curing only a small quantity of Hams cut down the proportion of Freeze-Em-Pickle, Sugar and Salt, also the quantity of water according to the quantity of Hams to be cured.

Quantity of Brine to Use for Curing 100 Pounds of Hams.

Five gallons by measure, or forty-two lbs. by weight, is the approximate amount of water to use for every 100 lbs. of Hams.

Tierces, after being packed with 285 lbs. of meat, will hold about 15 gallons of water. When curing Hams in vats, or open barrels, whether in small or large quantities, always use no less than 5 gallons of brine to every 100 lbs. of meat, as this makes the proper strength and a sufficient brine to cover the meat.

B. HELLER & CO., CHEMISTS, CHICAGO.

The Use of Molasses and Syrup Barrels.

Never use old molasses barrels, or syrup barrels for curing meat, unless they have been first thoroughly scoured and steamed, and cleansed with our **Ozo**. It is best to use oak tierces, and always be sure that they are perfectly clean and sweet before putting the meat into them to cure.

Shape of Vats.

Sometimes, vats of certain shapes require more brine to cover the meat than others, and in such cases, a proportionate amount of **Freeze-Em-Pickle**, Sugar and Salt, should be added to the necessary amount of water to make sufficient brine to cover the meat.

How to Overhaul Hams When Curing in Open Packages.

On the fifth day after packing each lot of Hams, it is necessary that they should be overhauled. This must be repeated seven days later; again in ten days; and a final overhauling should be given ten days later. Overhauling four times while curing, and at the proper time in each instance, is very important and must never be forgotten, especially when curing with this mild, sweet cure. Overhauling means to take the Hams out of the brine and to repack them in the same brine. The proper way to overhaul is to take a perfectly clean tierce, set it next to the tierce of Hams to be overhauled, pack the meat into the empty tierce, and then pour the same brine over the meat.

How to Cure Hams in Closed Up Tierces.

Large packers, who employ coopers, should always cure Hams in closed up tierces, as this is the best method known.

B. HELLER & CO., CHEMISTS, CHICAGO.

FIRST.—Mix the proper proportions of **Freeze-Em-Pickle**, Sugar and Salt for the different size Hams to be cured. These proportions are given in the foregoing table, under the heading, "Small Hams, Medium Hams, Heavy Hams." If the tierces are to be headed up, use half of the **Freeze-Em-Pickle**, Sugar and Salt for rubbing the Hams, and the half that is left over, after the Hams are rubbed, should be dissolved in the water which is to be used to fill the tierces. Rub each Ham well before packing; put only 285 lbs. of meat in each tierce, and then head them up.

SECOND.—Lay the tierces on their sides and fill them through the bunghole, with water in which the half of **Freeze-Em-Pickle**, Sugar and Salt left over after rubbing has been dissolved.

THIRD.—Insert the bung and roll the tierces. This will mix and dissolve the **Freeze-Em-Pickle**, Sugar and Salt.

FOURTH.—Overhaul five days after packing; again seven days later; again in ten days, and once more ten days thereafter. At each overhauling, examine each tierce for leaks; if any of the Pickle has leaked out, knock the bung in and refill. Remember to overhaul four times during the period of the first thirty-two days.

FIFTH.—Overhaul the Hams in closed up tierces, simply by rolling the tierces from one end of the cooler to the other. They ought to be rolled at least 100 feet.

SIXTH.—See paragraph on temperature for curing meat, page 35.

To give boiled hams a delicious smoke flavor, use **Zanzibar Liquid Ham Smoke** which can be put in the water when the hams are boiled. See full particulars on page 91.

B. HELLER & CO., CHEMISTS, CHICAGO.

DIRECTIONS FOR CURING SHOULDERS.

New York Shoulders: Have shank cut off above knee, trimmed close and smooth, and square at the butt.

California or Picnic Hams are made from Medium and Heavy Shoulders, well-rounded at the butt, and trimmed as near to the shape of a Ham as possible.

Boston Shoulders are made from Light Shoulders, well-rounded at the butt, similar to California Hams.

California and Picnic Hams, and square cut Butts, are cured in the same way, and with the same brine. The only change being in the strength of the brine and the time of curing, which must be made to suit the size of the Shoulder.

SMALL SHOULDERS.

Use for 100 lbs. { 9 lbs. of Common Salt.
Small Shoulders. { 1 lb. of FREEZE-EM-PICKLE.
 { 2 lbs. of Granulated Sugar.
 { 5 gals. of Cold Water.

Cure in this brine 50 to 60 days.

MEDIUM SHOULDERS.

Use for 100 lbs. { 10 lbs. of Common Salt.
Medium Shoulders { 1 lb. of FREEZE-EM-PICKLE.
 { 2 lbs. of Granulated Sugar.
 { 5 gals. of Cold Water.

Cure in this brine 60 to 70 days.

HEAVY SHOULDERS.

Use for 100 lbs. { 11 lbs. of Common Salt.
Heavy Shoulders. { 1 lb. of FREEZE-EM-PICKLE.
 { 2 lbs. of Granulated Sugar.
 { 5 gals. of Cold Water.

Cure in this brine 75 to 80 days.

FIRST.—Sort the Shoulders, separating the Small, Medium, and Large.

SECOND.—Take enough of any one size of the assorted Shoulders to fill a tierce, which will be

B. HELLER & CO., CHEMISTS, CHICAGO.

285 lbs.; then thoroughly mix together in a large pail, or box, the following proportions of **Freeze-Em-Pickle**, Sugar and Salt:

Use for 285 lbs. of Small Shoulders 3 lbs. of **Freeze-Em-Pickle**, 6 lbs. of best pure Granulated Sugar, and 27 lbs. of Salt.

For 285 lbs. of Medium Shoulders, 3 lbs. of **Freeze-Em-Pickle**, 6 lbs. of best Granulated Sugar and 30 lbs. of Salt.

For 285 lbs. of Heavy Shoulders, 3 lbs. of **Freeze-Em-Pickle**, 6 lbs. of best Granulated Sugar, and 33 lbs. of Salt.

How to Cure Shoulders in Open Barrels.

When the tierces or barrels, in which these Shoulders are cured, are not to be headed up, but are left open, use half of the **Freeze-Em-Pickle**, Sugar and Salt for rubbing, as follows:

FIRST.—Rub each Shoulder well with some of the mixture of **Freeze-Em-Pickle**, Sugar and Salt. Sprinkle a little of the mixture in the bottom of the tierce.

SECOND.—Pack the Shoulders in a perfectly clean tierce. The mixed **Freeze-Em-Pickle**, Sugar and Salt that is left after rubbing, should be used for making the brine. It will require 15 gallons of brine for each tierce of Shoulders. Make the brine by dissolving in cold water all the mixed **Freeze-Em-Pickle**, Sugar and Salt that is left after the Shoulders are rubbed. Stir well for a minute, until it is dissolved, then pour this brine over the meat.

When curing only a small quantity of Shoulders, cut down the proportions of **Freeze-Em-Pickle**, Sugar and Salt, also the quantity of water, according to the quantity of Shoulders to be cured.

Quantity of Brine to Use for Curing 100 Pounds of Shoulders.

Five gallons by measure, or forty-two lbs. by weight, is the approximate amount of water to use for every 100 lbs. of Shoulders.

Tierces, after being packed with 285 lbs. of meat, will hold about 15 gallons of water. When curing Shoulders in vats, or open barrels, whether in small or large quantities, always use not less than five gallons of brine to every 100 lbs. of meat, as this makes the proper strength and a sufficient brine to cover the meat.

The Use of Molasses and Syrup Barrels.

Never use old molasses barrels, or syrup barrels, for curing meat, unless they have been thoroughly scoured and steamed, and cleansed with our Ozo. It is best to use oak tierces, and always be sure that they are perfectly clean and sweet before putting the meat into them to cure.

Shape of Vats.

Sometimes vats of certain shapes require more brine to cover the meat than others, and in such cases, a proportionate amount of Freeze-Em-Pickle, Sugar and Salt should be added to the necessary amount of water to make sufficient brine to cover the meat.

How to Overhaul Shoulders When Curing in Open Packages.

On the fifth day after packing each lot of Shoulders, it is necessary that they should be overhauled. This must be repeated seven days later; again in ten days; final overhauling should be given ten

days later. Overhauling four times while curing and at the proper time in each instance, is very important and must never be forgotten, especially when curing with this mild, sweet cure. Overhauling means, to take the Shoulders out of the brine and to repack them in the same brine. The proper way to overhaul, is to take a perfectly clean tierce, set it next to the tierce of Shoulders to be overhauled, pack the meat into the empty tierce and then pour this same brine over the meat.

How to Cure Shoulders in Closed Up Tierces.

Large Packers, who employ coopers, should always cure Shoulders in closed up tierces, as this is the best method.

FIRST.—Mix the proper proportions of **Freeze-Em-Pickle**, Sugar and Salt for the different size Shoulders to be cured. These proportions are given in the foregoing table under the heading, "Small Shoulders, Medium Shoulders, and Heavy Shoulders." If the tierces are to be headed up, use half of the **Freeze-Em-Pickle**, Sugar and Salt for rubbing the Shoulders, and the half that is left over, after the Shoulders are rubbed, should be dissolved in the water which is to be used to fill the tierces. Rub each Shoulder well before packing; put only 285 lbs. of meat in each tierce, and then head them up.

SECOND.—Lay the tierces on their sides and fill them through the bung hole with water in which the half of the **Freeze-Em-Pickle**, Sugar and Salt left over after rubbing has been dissolved.

THIRD.—Insert the bung and roll the tierces. This will mix and dissolve the **Freeze-Em-Pickle**, Sugar and Salt.

B. HELLER & CO., CHEMISTS, CHICAGO.

FOURTH.—Overhaul five days after packing; again seven days later; again in ten days and once more ten days thereafter. At each overhauling, examine each tierce for leaks; if any of the Pickle has leaked out, knock the bung in and refill. Remember to overhaul four times during the period of the first thirty-two days.

FIFTH.—Overhaul the Shoulders in closed up tierces simply by rolling the tierces from one end of the cooler to the other. They ought to be rolled at least 100 feet.

SIXTH.—See paragraph on temperature for curing meat page 35.

DIRECTIONS FOR MAKING SUGAR CURED BREAKFAST BACON.

LIGHT BELLIES.

Use for 100 lbs. { 6 lbs. of Common Salt.
Light Bellies. { 1 lb. of FREEZE-EM-PICKLE.
{ 2 lbs. of Granulated Sugar.
{ 5 gals. of Cold Water.

Cure in this brine 20 to 25 days.

HEAVY BELLIES.

Use for 100 lbs. { 8½ lbs. of Common Salt,
Medium or { 2 lbs. of FREEZE-EM-PICKLE,
Heavy Bellies. { 2 lbs. of Granulated Sugar,
{ 5 gals. of Cold Water.

Cure in this brine 25 to 40 days, according to size.

FIRST.—Mix together the proper proportions of of **Freeze-Em-Pickle**, Sugar and Salt, as stated above for every 100 lbs. of Bellies.

SECOND.—Sprinkle a little of this mixture on the bottom of a perfectly clean tierce or vat.

THIRD.—Take half of the mixed **Freeze-Em-Pickle**, Sugar and Salt, and rub each piece of Belly with the mixture and pack the Bellies as loosely as possible.

B. HELLER & CO., CHEMISTS, CHICAGO.

FOURTH.—Put clean boards over the top of the Bellies and fasten or weigh down so as to keep them under the brine.

FIFTH.—Take half of the mixed Freeze-Em-Pickle, Sugar and Salt, left after rubbing, and dissolve it in water before it is put over the Bellies.

SIXTH.—For each 100 lbs. of bellies packed in the tierce or barrel, add not less than 5 gallons of brine, and pour it over the meat. Five gallons of water by measurement, or forty-two lbs. by weight, will make sufficient brine to cover, and is the proper amount for each 100 lbs. of Bellies.

SEVENTH.—Before putting the water over the Bellies, dissolve in it the mixed Freeze-Em-Pickle, Sugar and Salt left after rubbing; stir it for a few minutes until it is thoroughly dissolved, and then pour this brine over the Bellies.

EIGHTH.—Bellies must be overhauled three times while curing,—once on the fifth day; again seven days later; and again in ten days more. Overhauling must never be neglected, if good results are desired.

CORNED BEEF.

PLATES, RUMPS, BRISKETS, Etc.

Use for 100 lbs. $\begin{cases} 8 \text{ lbs. of Common Salt.} \\ 1 \text{ lb. FREEZE-EM-PICKLE.} \\ 2 \text{ lbs. of Granulated Sugar.} \\ 5 \text{ gals. of Cold Water.} \end{cases}$
Plates, Rumps, $\begin{cases} 8 \text{ lbs. of Common Salt.} \\ 1 \text{ lb. FREEZE-EM-PICKLE.} \\ 2 \text{ lbs. of Granulated Sugar.} \\ 5 \text{ gals. of Cold Water.} \end{cases}$
Briskets, etc. $\begin{cases} 8 \text{ lbs. of Common Salt.} \\ 1 \text{ lb. FREEZE-EM-PICKLE.} \\ 2 \text{ lbs. of Granulated Sugar.} \\ 5 \text{ gals. of Cold Water.} \end{cases}$

Cure the meat in this brine 15 to 30 days, according to weight and thickness of the piece.

Retail butchers, who cure Corned Beef in small quantities, and who from day to day take out pieces from the brine and add others, should make the brine as above, and handle the Corned Beef as follows:

B. HELLER & CO., CHEMISTS, CHICAGO.

Add a small quantity of **Freeze-Em-Pickle** and common Salt to the brine from time to time in order to keep up the strength of the Pickle to 60 degrees. Use a Salt Hydrometer for testing the Pickle, so its exact strength may be known at all times.

Few butchers realize the importance of building up a reputation on good Corned Beef. A good trade on Corned Beef enables the dealer to get higher prices for Plates, Rumps, Briskets and other cuts, which otherwise would have to be sold at a sacrifice. Corned Beef cured with **Freeze-Em-Pickle** will have a fine red cured-meat color, a delicious Corned Beef flavor, and will not be salty. If Briskets or Plates are used, they should be well boned. The skin on the inside of the Plates and Flanks should be removed, and the strip of gristle cut off the edge of the belly side.

All the glands or kernels should be cut out of the fat in the Brisket under the shoulder, and if any part is tainted, mouldy, discolored or slimy, it must be trimmed off, so no slimy or tainted parts will get into the brine. If Plates or Briskets are to be rolled, a small amount of the mixed **Freeze-Em-Pickle**, Sugar and Salt must be sprinkled on the inside, before rolling them. This will give the meat a delicious flavor, a nice red color and will cure it more uniformly and quickly.

Using Galvanized Iron Curing Tanks.

Galvanized iron tanks or vats are by far the best for the use of retail dealers in the curing of Corned Beef, as they are more easily kept clean.

How to Know When Corned Beef is Not Fully Cured.

If a piece of Corned Beef is cut before or after it is cooked, and the inside is not a nice, red color, it is because the meat is not cured through. It is often sold in this condition, but it is not advisable that it should be, as it cannot have the proper flavor unless it has been properly cured through.

GARLIC FLAVORED CORNED BEEF.

Many people like Garlic Flavor in Corned Beef, and butchers who want to please their customers should keep a supply of Corned Beef both with and without the Garlic Flavor. We make a special preparation known as **Vacuum-Garlic**, which enables butchers to give a Garlic Flavor to all kinds of meat without leaving any of the objectionable features that result from the use of fresh Garlic.

Vacuum-Garlic is a powder which we manufacture by a special process of our own from the very best selected Garlic. We neutralize the free acids which are always present in fresh Garlic. This makes **Vacuum-Garlic** more digestible. For this reason, it leaves no aftertaste or offensive breath. It is also powdered to an inpalpable powder and upon this account mixes more thoroughly with the meat. The flavor given by it is delicious, and the advantages gained by it will be thoroughly appreciated by all who use it.

B. HELLER & CO., CHEMISTS, CHICAGO.

DIRECTIONS FOR MAKING FANCY DRIED BEEF.

How to Cure Beef Hams and Shoulder Clots.

SMALL PIECES.

Use for 100 lbs. $\left\{ \begin{array}{l} 9 \text{ lbs. of Common Salt.} \\ 1 \text{ lb. of FREEZE-EM-PICKLE.} \\ 2 \text{ lbs. of Granulated Sugar.} \\ 5 \text{ gals. of Cold Water.} \end{array} \right.$
Small Beef Hams and Shoulder Clots.

Cure in this brine 50 to 60 days.

MEDIUM PIECES.

Use for 100 lbs. $\left\{ \begin{array}{l} 10 \text{ lbs. of Common Salt.} \\ 1 \text{ lb. of FREEZE-EM-PICKLE.} \\ 2 \text{ lbs. of Granulated Sugar.} \\ 5 \text{ gals. of Cold Water.} \end{array} \right.$
Medium Beef Hams and Shoulder Clots.

Cure in this brine 60 to 70 days.

HEAVY PIECES.

Use for 100 lbs. $\left\{ \begin{array}{l} 11 \text{ lbs. of Common Salt.} \\ 1 \text{ lb. of FREEZE-EM-PICKLE.} \\ 2 \text{ lbs. of Granulated Sugar.} \\ 5 \text{ gals. of Cold water.} \end{array} \right.$
Heavy Beef Hams and Shoulder Clots.

Cure in this brine 75 to 80 days.

FIRST.—Sort the Beef Hams and Clots separating the Small, Medium, and Large.

SECOND.—Take enough of any one size of the assorted Beef Hams and Clots to fill a tierce which will be 285 lbs.; then thoroughly mix together in a large pail or box, the following proportions of **Freeze-Em-Pickle**, Sugar and Salt:

Use for 285 lbs. of Small Beef Hams and Small Clots, 3 lbs. of **Freeze-Em-Pickle**, 6 lbs. of best Granulated Sugar and 27 lbs. of Salt.

For 285 lbs. of Medium Beef Hams and Medium Clots, 3 lbs. of **Freeze-Em-Pickle**, 6 lbs. of Granulated Sugar and 30 lbs. of Salt.

For 285 lbs. of Heavy Beef Hams and Heavy Clots, 3 lbs. of **Freeze-Em-Pickle**, 6 lbs. of best Granulated Sugar and 33 lbs. of Salt.

How to Cure Beef Hams and Clots in Open Barrels.

When the tierces or barrels in which these Hams and Clots are cured, are not to be headed up, but are left open, use half of the Freeze-Em-Pickle, Sugar and Salt for rubbing as follows:

FIRST.—Rub each Beef Ham and Clot well with some of the mixture of Freeze-Em-Pickle, Sugar and Salt. Sprinkle a little of the mixture in the bottom of the tierce.

SECOND.—Pack the Beef Hams and Clots in a perfectly clean tierce. The mixed Freeze-Em-Pickle, Sugar and Salt that is left after rubbing, should be used for making the brine. It will require 15 gallons of brine for each tierce of Beef Hams and Clots. Make the brine by dissolving in cold water all the mixed Freeze-Em-Pickle, Sugar and Salt that is left after the Beef Hams and Clots are rubbed. Stir well for a minute until it is dissolved, then pour this brine over the meat. When curing only a small quantity of Beef Hams and Clots, cut down the proportions of Freeze-Em-Pickle, Sugar and Salt; also the quantity of water, according to the quantity of Beef Hams and Clots to be cured.

Quantity of Brine to Use for Curing 100 lbs. of Beef Hams and Clots.

Five gallons by measure, or 42 lbs. by weight, is the approximate amount of water to use for every 100 lbs. of meat.

Tierces, after being packed with 285 lbs. of meat, will hold about 15 gallons of water. When curing Beef Hams or Clots in vats or

B. HELLER & CO., CHEMISTS, CHICAGO.

open barrels, whether in small or large quantities, always use not less than 5 gallons of brine to 100 lbs. of meat, as this makes the proper strength and a sufficient brine to cover the meat.

The Use of Molasses and Syrup Barrels.

Never use old molasses barrels or syrup barrels for curing meat, unless they have been thoroughly scalded and steamed, and cleansed with our **Ozo**. It is best to use oak tierces, and always be sure that they are perfectly clean and sweet before putting the meat into them to cure.

Shape of Vats.

Sometimes vats of certain shapes require more brine to cover the meat than others, and in such cases a proportionate amount of **Freeze-Em-Pickle**, Sugar and Salt should be added to the necessary amount of water to make a brine to cover the meat.

How to Overhaul Beef Hams and Clots When Curing in Open Packages.

On the fifth day after packing each lot of Beef Hams and Clots, it is necessary that they should be overhauled. This must be repeated seven days later; again in ten days; and a final overhauling should be given ten days thereafter. Overhauling four times while curing, and at the proper time in each instance, is very important and must never be forgotten, especially when curing with this mild, sweet cure. Overhauling means to take the Beef Hams and Clots out of the brine and to repack them in the same brine. The proper way to overhaul is to take a perfectly clean tierce, set it next to the tierce of Beef Hams and Clots to be overhauled, pack them into the empty tierce and then pour the same brine over the meat.

How to Cure Beef Hams and Clots in Closed up Tierces.

Large packers, who employ coopers, should always cure Beef Hams and Clots in closed up tierces, as this is the best method.

FIRST.—Mix the proper proportions of **Freeze-Em-Pickle**, Sugar and Salt for the different size Beef Hams and Clots to be cured. These proportions are given in the foregoing table under the heading, "Small Beef Hams and Clots, Medium Beef Hams and Clots, Heavy Beef Hams and Clots." If the tierces are to be headed up, use half of the **Freeze-Em-Pickle**, Sugar, and Salt, for rubbing the Hams and Clots, and the half that is left over after the Beef Hams and Clots are rubbed should be dissolved in the water which is to be used to fill the tierces. Rub each Beef Ham and Clot well before packing; put only 285 lbs. in each tierce, and ther head them up.

SECOND.—Lay the tierces on their sides and fill them, through the bung hole, with cold water in which the half of the **Freeze-Em-Pickle**, Sugar and Salt left over after rubbing has been dissolved.

THIRD.—Insert the bung and roll the tierces. This will mix and dissolve the **Freeze-Em-Pickle**, Sugar and Salt.

FOURTH.—Overhaul five days after packing; again seven days thereafter; again ten days thereafter, and once more ten days later. At each overhauling, examine each tierce for leaks; if any of the Pickle has leaked out, knock the bung in and refill. Remember to overhaul four times during the period of the first thirty-two days.

FIFTH.—Overhaul the Beef Hams and Clots in closed up tierces, simply by rolling them from one end of the cooler to the other. They ought to be rolled at least one hundred feet.

SIXTH.—See paragraph on temperature for curing meat, page 35.

GENERAL HINTS FOR CURING MEATS.

Curers of meat, who are well acquainted with us know that we have been in a position to acquire more knowledge in the curing and handling of meats than anyone in the United States. As it is well known, we have been consulting chemists and packing house experts for many years; therefore, the general hints which we offer for curing meats are suggested by the results of many years of practical experience.

Chilling Meats.

Hams, Shoulders, Bellies and other cuts must be thoroughly chilled before they are put into pickle. From one to two days before being packed, depending upon the temperature, they should be hung up or laid on a rack in the cooler, in order to draw out all the animal heat that is in them. This will make them firm and ready for packing. If the cooler in which meats are chilled is not cold enough to make the Hams, Shoulders, Bellies, etc., firm and solid in 48 hours, it is advisable to lay the meat on the floor over night and place crushed ice over it; this will harden the meat. Packers, using ice machinery for cooling, can bring the temperature low enough during the warm weather to properly chill the meat; however, it must not be frozen. Those using a common ice house can employ the crushed ice method, which is to spread the meat on the floor and throw cracked ice over the meat, allowing it to remain over night. It should always be remembered that if meat is put into brine soft and spongy, it will become pickled-soaked, and in such condition will

B. HELLER & CO., CHEMISTS, CHICAGO.

never cure properly. It will come out of the brine soft and spongy, and will often sour when in the smoke house. A great deal of meat spoils in curing only for the reason that the animal heat has not been removed before the meat is packed and placed in brine. When the animal heat is all out of the meat, the meat will be firm and solid all the way through. In order to get the best results, the inside temperature of Hams and Shoulders when packed, should not be over 36 to 38 degrees Fahrenheit. The meat should be tested with a thermometer made for such purpose before it is packed. We sell a Meat Testing Thermometer for \$1.25; every curer of meat should have one. An illustration of this Meat Testing Thermometer will be found on page 95.

Overhauling.

When curing Hams, Shoulders, and all kinds of sweet-pickled meats in open vats, overhauling is a very important feature; it must be done at least four times during the curing period. When curing in closed up tierces, the tierces must be rolled at least four times during the curing period. Bellies must be overhauled at least three times while curing in open vats, and if cured in closed up tierces, they must be rolled at least three times during the curing period. This overhauling is so necessary because it mixes the brine and changes the position of the meat in such a way that the brine gets to all parts of it.

Pumping Meats.

We highly recommend pumping Hams and Shoulders. It is a safeguard against shank and body souring, should they, through some careless-

B. HELLER & CO., CHEMISTS, CHICAGO.

ness, be insufficiently chilled all the way to the bone. It is also a protection against sour joints, and insures a uniform cure. Packers and curers, who do not use a pump and **Freeze-Em-Pickle**, are suffering losses from sour meats, which during a year's business would mean a large profit to them.

There is a mistaken idea among many butchers and packers that pumping Hams and Shoulders is injurious to the meat. The facts do not warrant such a belief, as the best cured and the best flavored meats are those that have been pumped. When Hams and Shoulders are not pumped, it requires weeks for the pickle to penetrate through to the bone, which is the vital spot of a Ham or Shoulder. If the joints, tissues and meat around the bone, are not wholly and thoroughly cured, the entire Ham or Shoulder is inferior and no good; therefore, in order to have a mild cure, sweet flavor at the joints, and uniform color, they must be pumped. Pumping with **Freeze-Em-Pickle** is a safeguard against shank and body souring; it gives the inside of a Ham or Shoulder a delicious flavor, a good color, and insures a uniform cure; it cures the joints and the meat around the bone thoroughly, and greatly reduces the period of curing. The secret and principal feature in pumping Hams and Shoulders, is to have the right kind of pumping brine. When common brine, or ordinary sweet-pickle is used for pumping, the Hams or Shoulders usually become pickle-soaked, and if the refrigeration under such conditions is not the very best, or if the Hams or Shoulders are not thoroughly chilled, the smallest degree of animal heat which may be remaining in them will start fermentation, causing the meat to sour next to the

B. HELLER & CO., CHEMISTS, CHICAGO.

joints. It is, therefore, plain to be seen that pumping, under such conditions, instead of doing good, will in reality result in injury. On the other hand, when the pumping brine is made of **Freeze-Em-Pickle**, all of these objections are overcome, and the meat will not be pickle-soaked, nor will it become soft and flabby. The brine made of **Freeze-Em-Pickle** is absorbed by the meat around the bone and joints so thoroughly as to leave no trace of it after the Ham is cured; it also gives the inside meat a beautiful red color, and a delicious flavor. Hams that have been pumped with **Freeze-Em-Pickle** and cured in the brine made of it, will not dry up and become hard when fried or cooked; when sliced cold they will not crumble, but will slice nicely and have a most delicate and pleasing flavor.

Directions for Pumping.

One gallon of pumping brine is sufficient for pumping one tierce, or 285 lbs. of meat. Make the pumping brine as follows:

$\frac{1}{2}$ lb. of **FREEZE-EM-PICKLE**.
2 lbs. of Pure Granulated Sugar.
3 lbs. of Salt.
1 gal. of Water.

Stir thoroughly and dissolve before using. As this will make a thick brine which is more than saturated, it will precipitate when left standing, therefore, when mixed in large quantities, it should be stirred occasionally. Meats should never be pumped with anything but a solution that is thoroughly saturated.

Pump the Hams or Shoulders just before they are packed, and if it is desired to rush the cure, pump them every time that the Hams are overhauled. The pumping solution must be cold when

pumped into the meat. Ordinarily, three insertions of the needle in the Hams are sufficient; once at the shank to the hock joint; once to the thigh and along the bone, and once from the butt end to the joint under the hip bone and into the fleshy part. In a very heavy Ham as many as six insertions should be made, and the same with very heavy Shoulders; three insertions of the needle into a Shoulder are also sufficient; one to the first, one to the second shoulder joint, and one under the blade from the end, or diagonally from the back of the shoulder toward the end. More insertions may be made without injury to the meat, but the above are all that are required for good results. One cubic inch of solution is enough for each insertion, and after withdrawing the needle, the hole must be squeezed shut with the thumb to prevent the solution from oozing out. Stir the solution well before starting to pump. The pumper must be careful not to pump air into the meat. Never allow the Pickle to go below the sucker of the pump.

Packing in Tierces.

No more than 285 lbs. of meat should be packed into a standard size tierce, as a greater amount will not leave room enough for the proper quantity of Pickle.

Use Only Pure Sugar.

The necessity of using pure sugar, and no adulteration, in sweet-pickling meats is not properly appreciated. The very best and purest article of granulated sugar should always be used if the best results are desired. As is well known, sugar is a great nutrient, and economizes the use

of proteids in food. As a food, sugar possesses the fuel value of starch, and is much more readily digested; therefore, the use of pure sugar assists in the digestibility of meat. On the other hand, the adulterants of sugar are fermentatives; they retard digestion and counteract the nutrient values of meat. They destroy the alkalies with which pure cane sugar forms definite compounds; their effect upon the brine is to make it slimy and ropy. The brine, therefore, becomes less penetrative, and sour meat is the natural result. The very effect which pure sugar produces by its chemical combination with salt, and which contributes to the sweetness of the meat, is entirely lacking in sugar adulterants; necessarily, fermentation, the contrary effect, sets in, which destroys and disintegrates the albumen in the cells of the meat. The coagulation of the albumen, which should and does take place in all well preserved meats, is entirely lacking, and cannot take place with impure and adulterated sugar to counteract the effect of preserving agents. Therefore, use only the best pure granulated sugar in making all sweet-pickle. A simple test for the purity of sugar can be made with water or alcohol. The pure article when made into a solution of either water or alcohol will show up clear and transparent; when kept in large and well closed and completely filled bottles such a solution will not deposit a sediment even after a period of long standing. Following are the scientific methods for testing the purity of sugar:

Test for Pure Sugar.

If 1 Gm. of sugar be dissolved in 10 C.c. of boiling water, the solution mixed with 4 or 5 drops of silver nitrate test-solution, then about 2 C.c. of ammonia

water added, and the liquid quickly brought to the boiling point, not more than a slight coloration, but no black precipitate, should appear in the liquid after standing at rest for five minutes. Cane sugar may be distinguished from grape sugar by what is known as the Trommer's test which consists in the use of Copper Sulphate and Potassa. If a solution of cane sugar be mixed with a solution of Copper Sulphate, and Potassa be added in excess, a deep blue liquid is obtained which on being heated lets fall, after a time, a little red powder. A solution of grape sugar similarly treated, yields by heat, a copious greenish precipitate, which rapidly changes to scarlet and eventually to dark red. When a liquid containing grape sugar is boiled with Sodium Carbonate and some Basic Bismuth Nitrate, a great coloration or blackening of reduced Bismuth is produced. Cane sugar, similarly treated, has no effect on the test.

Temperature for Curing Meat.

An even temperature of 38 degrees Fahrenheit is the best temperature for curing meats. Most butchers, however, have no ice machine, and, therefore, are not able to reach such a low temperature in their coolers; nevertheless, they should try to get their coolers as low in temperature as possible, and should at all times be careful to keep the doors closed, and not leave them open longer than is necessary at any time. The temperature of 37 to 39 degrees Fahrenheit is what should govern all packers who use ice machines; those who are fortunate enough to have ice machinery should never allow the cooler to get below 37 degrees, nor above 40 degrees. Many packers let the temperature in their coolers get too cold, and in

B. HELLER & CO., CHEMISTS, CHICAGO.

winter during the very cold weather, the windows are sometimes left open, which allows the temperature to get too low. This should always be avoided, as meat will not cure in any brine, or take salt when dry salted, if stored in a room that is below 36 degrees Fahrenheit. If meat is packed even in the strongest kind of brine, and put into a cooler, which is kept at 32 to 33 degrees of temperature, and thus left at this degree of cold for three months, it will come out of the brine only partly cured. The reason for this is the fact that meat will not cure and take on salt at such a low temperature, and as the temperature herein given is above freezing point, which is 32 degrees, the meat will only keep for a short time, and then it starts to decompose when taken into a higher temperature. Anyone, who is unaware of this fact, will see how necessary it is to have accurate thermometers in a cooler, to examine them frequently, and to closely watch the temperature of the room. See illustration of our Standard Cold Storage Thermometer on page 96.

The first essential point to watch before putting meat into brine, is to be absolutely certain that it is properly chilled through to the bone. Those who are not equipped with ice machinery for properly chilling meat in hot weather must spread the meat on the floor after it is cut ready for packing, and place crushed ice over it for 24 hours, to thoroughly chill it before it is packed in the salt. This will get the temperature of the meat as low as 36 to 38 degrees Fahrenheit before putting it in the brine. It is necessary that small butchers, who have no ice machines, and rely upon the ice box for a cooler, should use the greatest care to see that the meat is well and thoroughly chilled.

B. HELLER & CO., CHEMISTS, CHICAGO.

Thousands of pounds of meat are spoiled yearly simply for the one reason that the temperature of the meat is not brought down low enough before the meat is salted. In the summer, hams and heavy pieces of pork should never be packed by persons having no ice machine, unless the meat is first put on the floor for at least twelve hours with broken ice to thoroughly cover it. If our directions are carefully followed and **Freeze-Em-Pickle** is used, such a thing as spoiled meat will be unknown.

Using Brine Twice.

The Pickle, in which Hams have been cured, but which is still sweet and not stringy or ropy, is the best brine in which to cure light bellies. Nothing need be added to it. It should be used just as it comes from the Hams. While brine in which Hams have been cured can be used once more for curing Breakfast Bacon, it should be remembered that it must not be used a second time for curing Hams or Shoulders.

The Temperature of Brine.

Make all Pickle in the cooler, and have the water or brine as low in temperature as the cooler when you put it on the meat. Try to have the temperature of the brine not over 38 degrees Fahrenheit when putting it over the meat. A great deal of meat is spoiled in curing by having the brine too warm when the meat is put into it.

Ice Water.

Never use the drip water of melted ice from a cooler for making Pickle, as it contains many impurities, and, therefore, should never be used.

B. HELLER & CO., CHEMISTS, CHICAGO.

DRY SALT MEATS.

SHORT RIBS (REGULAR) are made from the sides of the hog, between the Ham and Shoulder, having the loin and ribs in, and back bone removed.

EXTRA SHORT RIBS are made from the sides of the hog, between the Ham and Shoulder, with loin taken out, but belly ribs left in.

SHORT RIBS (HARD) are made from the sides of the hog, between the Ham and Shoulder, having the loin, ribs and back bone in.

SHORT CLEARS are made from the sides of the hog, between the Ham and Shoulder, having the loin in, and ribs and back bone removed.

EXTRA SHORT CLEARS are made from the sides of the hog, between the Ham and Shoulder with loin and all bones taken out.

LONG CLEARS are made from sides, Ham being cut off, but Shoulder left in, back bone and ribs removed, shoulder blade and leg bone taken out, and leg cut off close to the breast.

EXTRA LONG CLEARS are made from sides, Ham being cut off, back bone, *loin and ribs* removed. Shoulder blade and leg bone taken out and leg cut off close to the breast.

SHORT CLEAR BACKS are made from the backs of hogs with the loin left in, but ribs and back bone removed; also known as **LEAN BACKS** and **LOIN BACKS**.

SHORT FAT BACKS are made from the fat backs of prime hogs, being free from lean and bone, and properly squared on all edges.

DRY SALT BELLIES are made from medium size hogs, cut square and well trimmed on all edges, with ribs left in.

DRY SALT CLEAR BELLIES are made from medium size hogs, cut square and well trimmed on all edges, with ribs taken out.

HOW TO CURE DRY SALT MEATS.

Sides.

FIRST.—Thoroughly chill the hogs so they are firm and solid. This will require letting them hang in the cooler after they are killed about 48 hours. Should the meat not be perfectly solid and thoroughly chilled, when cut up, spread it on the floor of a dry cooler for 24 hours, which ought to be long enough in a fair cooler to thoroughly chill the meat.

SECOND.—Make a tub of brine, using 15 lbs. of salt and 1 lb. of **Freeze-Em-Pickle** to each 5 gallons of brine.

THIRD.—Take a pickle pump, and pump some of the above brine into the meat along the backbone, being careful to get it all through the thick part.

FOURTH.—Dip the sides into the tub of brine, and then lay them on a table or trough and rub thoroughly with salt. They must be dipped in brine, so that the **Freeze-Em-Pickle** will get all over the meat, and so the salt will adhere to it.

FIFTH.—Clean the floor in the cooler or curing room with **Ozo Antiseptic Washing Compound**; sprinkle a little salt on the floor, and then pile the sides one on top of the other. Between each side spread a layer of salt, and see that all parts of the meat are covered with the salt. The more salt put on it, the better.

SIXTH.—Five days after salting the sides, shake off the salt, and pump them again in the same manner as when first salting; dip into the vat of brine, and dry salt again; then stack up the same as in the first instance, putting salt between each

B. HELLER & CO., CHEMISTS, CHICAGO.

layer, and repeating this overhauling every ten days until the sides are cured.

How Long to Cure Light Dry Salt Sides.

Light sides will fully cure in from 30 to 35 days, and should be resalted three times, which with the first salting received by them, will give them four saltings during the curing period. These saltings are given on the first day, the fifth day, the fifteenth day, and the twenty-fifth day.

How Long to Cure Heavy Dry Salt Sides.

Heavy sides will be fully cured in from 50 to 60 days, according to size, and should be resalted five times during the curing, as follows: The first day, the fifth day, and then every ten days. After 45 days, the meat need not be rehandled, and can then remain in the cooler piled up, as long as one wishes to keep it. It should not be taken out of the cooler, however, until it has been in salt 50 to 60 days, according to the season of the year.

Temperature of Cooler for Dry Salting.

Full information as to the temperature of the cooler for dry salting will be found on page 35. under the head "Temperature."

Dry Salt Curing by Butchers Who Have no Ice Machine.

Small butchers, who have no ice machine, and simply use an ice box for a cooler, must use the greatest care to see that the meat is well chilled before salting, and they must also use plenty of salt. For the special benefit of small butchers, we will say that we fully realize the conditions which surround them, and we are well aware that they

B. HELLER & CO., CHEMISTS, CHICAGO.

cannot get the temperature in an ice box as low as with an ice machine; but nevertheless, they can always cure meat with **Freeze-Em-Pickle**, and get better results than they can with any other curing agent known.

BOILING THE BRINE.

Boiling the brine improves it some, but not enough to pay for the extra trouble it makes. We recommend boiling the water, if you have the time, as it purifies it. When you have reason to believe that the water is impure, or when it is known to be tainted with vegetable matter, the brine should always be boiled, and the impurities will then float on the surface, and can be skimmed off. In curing meat, be careful to do everything right as you go along, for if you spoil the meat, you will hardly become aware of it until it is too late to remedy your error.

CLEANSING CURING-PACKAGES.

All curing packages should be taken out of the cooler after the meat has been cured in them, and scalded and washed thoroughly clean with hot water and **Ozo**. Soda or Soda-ash may also be used, but the best results will be obtained with **Ozo**, which is a thoroughly Antiseptic Washing Powder, and kills all germs which come in contact with it. Where Soda or Soda-ash is used, the packages are simply cleaned, but are not disinfected. When **Ozo** is used, however, the packages are not only cleansed and purified, but are also sterilized and disinfected. When packages have been thoroughly cleaned, they should be put out in the sun and allowed to remain there for a day or two. The sun

B. HELLER & CO., CHEMISTS, CHICAGO.

will thoroughly dry them, and the fresh air will leave them sweet and pure.

BRINE ABSORBS FOREIGN ODORS.

Warm carcasses of meat should never be put into a cooler where meat is being cured in open vats, as the cold pickle will absorb the impure animal heat, and odors which these carcasses give off. Never allow sour pickle of any kind to remain in the curing room, as cold brine or water will absorb all foreign odors. To demonstrate this, take a glass of cold water, set it on a table next to a glass of tainted brine, and cover both with a bucket or pan; allow them to remain over night, and the next morning the cold water will have the same odor as the tainted brine. This will easily prove how meat can be tainted when curing in open tierces or vats, if anything sour or spoiled is in the cooler; therefore, curing rooms must be kept as clean as possible.

HOW TO PURIFY AIR IN COOLER.

In places, where there are vapors or gases which cannot escape from the cooler, they can be entirely removed by hanging pails in the cooler filled with charcoal. Charcoal is a great absorbent and will absorb all such gases and odors. Sulphur may also be burnt in the cooler to purify the air, and the room should always be cleansed with **Ozo Antiseptic Washing Compound** as a disinfectant and sterilizer.

DRIPPINGS FROM REFRIGERATING PIPES.

Never allow the drippings from refrigerating pipes along the ceiling, or from ice chambers, to

B. HELLER & CO., CHEMISTS, CHICAGO.

drip into open vats containing meats while curing, as they will reduce the strength of the brine and make no end of trouble.

HOW TO KEEP HAMS, SHOULDERS, BACON, DRIED BEEF, AND ALL KINDS OF PICKLED MEATS IN BRINE FOR A YEAR OR LONGER.

All kinds of pickled meat after it is fully cured, if stored in a cooler in which the temperature is kept down to 28 degrees can be kept in this cooler for a year, or even longer, and when removed will come out like fresh cured meat. During the time when Hams and other meats are low, they can be stored in a freezer, and kept there until such a time as they are in greatest demand and will sell at the highest price. This enables the packer to reap a large profit. At a temperature of 28 degrees, the meat will not freeze after it is cured, and the brine of course does not freeze, as salt water will not freeze at that temperature. When meat is taken out of such cold storage to be smoked, it should first be soaked for three to five hours in fresh water, then washed and smoked the same as regular fresh cured meat.

WASHING CURED MEAT BEFORE SMOKING.

Hams, Shoulders, Bacon and all cured meats should be washed in hot water and scrubbed with a brush before being put into the smoke house. This is very important, as the meat thus scrubbed will come out of the smoke looking much better. The water should be as hot as the men can work with. The hotter the water, the better the meat will look after being smoked.

B. HELLER & CO., CHEMISTS, CHICAGO.

SMOKING.

Always treat Hams, Shoulders and Bacon with **Zanzibar Carbon** before smoking. It maintains a beautiful color and prevents mould on meat. A booklet of special instructions, with information on the "Methods of Smoking and Curing" will be sent free for the asking.

SMOKE FLAVOR.

We manufacture **Zanzibar Liquid Ham Smoke** for smoking meats without smoke house or fire. It imparts a delicious spicy smoke flavor, which is more palatable and far better than can be secured by hickory smoke with a fire. **Zanzibar Liquid Ham Smoke** produces a rich, natural smoke color; prevents mould and skippers; does not rub off, and is easy to use. See page 91. for information in regard to **Zanzibar Liquid Ham Smoke**.

DESCRIPTION OF BARRELED PORK.

MESS PORK is made from the sides of well-fattened hogs, split through the backbone, and cut in strips about six inches wide.

MESS PORK SHORT CUT is made from the backs of prime hogs, split through the backbone, backbone left in, and bellies taken off; cut into pieces six inches square.

CLEAR BACK PORK is made from the fat part of the backs of prime hogs, being free from lean and bone, even in thickness, and cut into pieces about six inches square.

FAMILY PORK LEAN is made from the top of shoulders, when cut into California Hams. It has one-half of the blade bone in, and is about two-thirds fat, and one-third lean.

B. HELLER & CO., CHEMISTS, CHICAGO.

CLEAR BEAN OR BUTT PORK is made from the fat cheek or jowl, cut square.

CLEAR BRISKET PORK is made from the Briskets of prime medium weight hogs, ribs removed and pieces cut about five inches wide.

RIB BRISKET PORK is made from the Briskets of prime medium hogs, ribs left in, and cut into pieces about five inches wide.

LOIN PORK is made from the end of the back next to the Ham, with both lean and fat, and has a portion of the tail bone in.

PIG PORK: Light selected boneless Bellies cut into five inch pieces, trimmed square.

BELLY PORK: Selected heavy weight Bellies, cut into five inch pieces, with ribs left in.

EXTRA SHORT CLEAR PORK is made from the sides of hogs, with the loin and backbone removed, and the Belly ribs left in, cut into strips five inches wide, squared at each end.

LEAN END PORK is made from selected medium weight Rib Bellies, cut into strips five inches wide.

DIRECTIONS FOR CURING BARRELED PORK.

Never pack more than 190 lbs. of pork in an ordinary pork barrel.

FIRST.—Take a perfectly clean pork barrel, and throw three handfuls of salt on the bottom of the barrel.

SECOND.—Put in a layer of pork; throw three handfuls of salt over this layer.

THIRD.—Keep packing layer after layer, until the 190 lbs. of pork are packed in the barrel, and while packing put three handfuls of salt over each layer of the pork.

B. HELLER & CO., CHEMISTS, CHICAGO.

FOURTH.—If it can possibly be obtained, it is always best to use coarse rock salt, or coarse evaporated salt, which is made especially for this purpose; but if you cannot get coarse salt, any salt will also answer the purpose. In packing it is necessary to use 35 lbs. of salt for each barrel over and above the salt used in the brine.

FIFTH.—The following are the proper proportions for brine for 190 lbs. of pork: Put 10 gallons of cold water in a keg or tub; dissolve in this water 2 lbs. of **Freeze-Em-Pickle** and 30 lbs. of salt. Stir this well until it is all dissolved, and then pour the brine over the pork.

SIXTH.—If the barrels are to be headed up, head up first, and then put in the brine through the bung hole.

Barreled Pork Need Not Be Overhauled.

Barreled Pork when packed in accordance with these directions with **Freeze-Em-Pickle** and salt, and then stored in a cooler, will never spoil, but will cure with a most delicious flavor. It is not necessary that barreled pork should be overhauled; overhauling is required only for dry-salt and sweet-pickled meats. After the pork is fully cured, which will vary according to the size of the pieces, from 40 to 60 days, the pork can be shipped anywhere, into any hot climate and will remain in perfect condition without spoiling.

Extreme care must be exercised to thoroughly chill the pork before it is packed; if animal heat is left in the pork, it will not cure properly, any more than will hams when they are put into brine with the animal heat left in them. Good results, when curing barreled pork, cannot be ex-

pected if the meat is not in proper condition when packed.

Temperature for Barreled Pork.

It is necessary that the greatest care should be exercised not to let the pork freeze while curing. Brine for barreled pork will not freeze at the freezing point of water, but the meat in the brine will freeze, and will not cure if the temperature is lower than the freezing point for any length of time. See instructions as to Temperature to be found on page 35.

HOW TO CURE BEEF TONGUES.

FIRST.—Cut the tongues out of the heads as soon as possible, and with warm water scrub off all the slime and dirt, with a stiff brush; hang up in a cooler on a hook at the gullet, to make the tongues thick instead of long and thin.

SECOND.—Let them hang for at least 24 hours in a cooler.

THIRD.—When the tongues are thoroughly chilled and firm, cut off the surplus fat and square the tongues at the gullet by trimming off all ragged pieces.

FOURTH.—Put them into a strong common salt brine to leach them, and leave them in this brine from 10 to 20 hours.

FIFTH.—Take them out of this brine and rub the slime off the tongues and out of the gullet, and also rub the gullet with dry salt.

SIXTH.—If only a few tongues are to be cured make a barrel of pickle, as follows, and simply throw the tongues into it: For every 5 gallons of water, add 1 lb. of **Freeze-Em-Pickle**, 2 lbs. of

B. HELLER & CO., CHEMISTS, CHICAGO

Pure Granulated Sugar, and 9 lbs. of Common Salt.

SEVENTH.—Where large packers wish to pack tongues in tierces, the tongues should be handled as follows: Weigh out 285 lbs.; then mix together in a box or tub the following:

3 lbs. of **FREEZE-EM-PICKLE**.
6 lbs. of Best Granulated Sugar.
27 lbs. of Salt.

EIGHTH.—Rub each tongue with some of this mixture and pack as loosely as possible in the tierce, using about one-half of the mixture of **Freeze-Em-Pickle**, Sugar and Salt for rubbing, and the other half for making the brine. It will require 15 gallons of brine to fill the tierce, so dissolve the balance of the mixture of **Freeze-Em-Pickle**, Sugar and Salt in 15 gallons of water, and pour over the tongues.

NINTH.—If the tierces are to be headed up, the heads should be put in, and the brine should be poured into the tierce through the bung hole. The overhauling of tongues is just as important, as is the overhauling of hams and shoulders. They should be overhauled in the same manner, and the same number of times. By reference to directions for curing hams and shoulders, which will be found on previous pages, all the necessary instructions can be followed. To give the tongues a proper flavor, they ought to cure from 50 to 60 days.

GARLIC FLAVORED TONGUES.

Many like Garlic flavored tongues, and this desire can be fully satisfied by adding about two tablespoonfuls of Vacuum-Garlic to each tierce of tongues; add it to the brine before it is poured over the tongues. This will give them a most de-

B. HELLER & CO., CHEMISTS, CHICAGO.

licious flavor which will be relished even by people who do not like fresh Garlic.

HOW TO CURE HOG TONGUES.

Hog Tongues should be handled and cured in exactly the same manner as beef tongues. The brine should be made of the same strength and in the same manner, and when so made, it will cure the hog tongues in about 30 days. The directions for curing beef tongues can be used for curing hog tongues in every particular.

CURING BEEF CHEEKS FOR CANNING.

FIRST:—The cheeks should be cut out of the head immediately after the beef is killed, all the fat should be trimmed off, and then the cheeks should be twice cut, lengthwise, through the outside muscles.

SECOND:—They should be then thrown into ice water to which has been added some salt, and they should be allowed to remain there for an hour or two. This will draw out all the slime and blood.

THIRD:—The cheeks should then be put on a coarse wire screen, or a perforated galvanized iron pan placed in a cooler and spread out as thinly as possible, so as to give them a chance to thoroughly chill. A thorough chilling in a cold cooler will require 24 hours.

FOURTH:—The cheeks should then be salted, and packed into tierces; 285 lbs. should be put into each tierce.

FIFTH:—Handle the cheeks as follows:—For each 285 lbs., mix in a box or tub, 3 lbs. of **Freeze-Em-Pickle**, 6 lbs. of Granulated Sugar and 24 lbs. of Common Salt.

SIXTH:—Then put 285 lbs. of cheeks on a table and take half of the mixture of **Freeze-Em-Pickle**, Sugar and Salt and mix it with the cheeks thoroughly; then shovel into tierces.

SEVENTH:—If the tierces are to be headed up, put the heads in and take the balance of the mixture of **Freeze-Em-Pickle**, Sugar and Salt and dissolve it in 15 gallons of cold water, which pour into the tierces through the bung hole. Insert the bung, and roll the tierces. This will mix and dissolve the **Freeze-Em-Pickle**, Sugar and Salt. Overhaul in closed up tierces simply by rolling them from one end of the cooler to the other. They ought to be rolled at least 100 feet.

EIGHTH:—If the tierces are to remain open, take 15 gallons of water in which dissolve the remaining mixture of **Freeze-Em-Pickle**, Sugar and Salt, and pour this brine over the cheeks; put boards over the top to keep the meat from floating or from coming out of the top of the barrel. At the end of five days after salting, the cheeks must be overhauled and re-handled by transferring them to another tierce with a large fork made for such purpose; this should be repeated every five days, viz., on the fifth day, on the tenth day and on the fifteenth day. After each overhauling, the same brine is always used to pour over the meat. If the cheeks are to be kept for any length of time, they should have another overhauling 25 to 30 days from the day they were packed. Cheek meat slimes considerably making it difficult to cure. When the cheeks are overhauled, if the pickle is thick and ropy, new brine of the same strength as the original brine will have to be made and poured over them, instead of the old brine.

B. HELLER & CO., CHEMISTS, CHICAGO.

The cheek meat must be thoroughly washed in cold water before being put into fresh brine.

CURING HOG LIVERS.

Cut off plucks and chill livers thoroughly; then pump them in three or four places with a long slender open nozzle, about $\frac{5}{8}$ to $\frac{1}{2}$ inch in diameter. Stick the nozzle of the brine pump into the different veins on the lower side of the livers and pump them until they swell up from the pressure of the brine; then lay them out on a rack for 24 hours in a cooler and allow the blood to ooze out of them.

PUMPING PICKLE FOR LIVERS.

Make a pumping pickle for livers as follows:—

1 lb. of FREEZE-EM-PICKLE,
15 lbs. of Common Salt,
5 gal. of Water.

On the next day after the livers have been pumped, pack them in a 60° common salt brine; nothing else need be added. In this way, the livers can be kept for a long time. When pickling livers, it is absolutely necessary that all animal heat should be extracted from them, and that they should be properly chilled and cooled, otherwise, they will not keep.

CURING BEEF LIVERS.

Cut off plucks and chill livers thoroughly. Pump the curing brine into them in three or four places by using a long slender open nozzle about $\frac{5}{8}$ to $\frac{1}{2}$ inch in diameter, which insert into the different veins on the lower side of the livers. The brine should be forced into them until the pressure swells them up; after pumping them, lay

B. HELLER & CO., CHEMISTS, CHICAGO.

them out on a rack for 24 hours in a cooler and allow the blood to ooze out of them. The pumping brine for beef livers is made the same as the brine for hog livers as follows:—

1 lb. of FREEZE-EM-PICKLE,
15 lbs. of Common Salt,
5 gal. of Water.

The day after the livers have been pumped, they should be packed in a 60° common salt brine; nothing else need be added. All animal heat must be thoroughly extracted, and the livers must be properly chilled and cooled.

DIRECTIONS FOR CURING LEAN BUTTS FOR BONELESS HAMS.

LIGHT WEIGHT BUTTS.

Use for 100 lbs. $\begin{cases} 8 \text{ lbs. of Common Salt.} \\ 1 \text{ lb. of FREEZE-EM-PICKLE.} \\ 2 \text{ lbs. Granulated Sugar.} \\ 5 \text{ gals. of Cold Water.} \end{cases}$
Light Weight Butts.

Cure in this brine 20 to 30 days.

HEAVY WEIGHT BUTTS.

Use for 100 lbs. $\begin{cases} 9 \text{ lbs. of Common Salt.} \\ 1 \text{ lb. of FREEZE-EM-PICKLE.} \\ 2 \text{ lbs. of Granulated Sugar.} \\ 5 \text{ gals. of Cold Water.} \end{cases}$
Heavy Weight Butts.

Cure in this brine from 30 to 40 days according to size.

FIRST.—Sort the Butts separating the Light Weight Butts and the Heavy Weight Butts.

SECOND.—Take enough of any one size of the assorted Butts to fill a tierce which will be 285 lbs.; then thoroughly mix together in a large pail or box the following proportions of Freeze-Em-Pickle, the very best and purest Granulated Sugar and Salt:

Use for 285 lbs. of Light Weight Butts, 3 lbs. of Freeze-Em-Pickle, 6 lbs. of Granulated Sugar, and 24 lbs. of Salt.

B. HELLER & CO., CHEMISTS, CHICAGO.

For 285 lbs. of Heavy Weight Butts, 3 lbs. of Freeze-Em-Pickle, 6 lbs. of Granulated Sugar, and 27 lbs. of Salt.

How to Cure Butts in Open Tierces.

When the tierces or barrels in which these Butts are cured, are not to be headed up, but are left open, use half of the Freeze-Em-Pickle, Sugar and Salt for rubbing as follows:

FIRST.—Rub each Butt well with some of the mixture of Freeze-Em-Pickle, Sugar and Salt. Sprinkle a little of the mixture in the bottom of the tierce.

SECOND.—Pack the Butts in a perfectly clean tierce. The mixed Freeze-Em-Pickle, Sugar and Salt that is left after rubbing should be used for making the brine. It will require 15 gallons of brine for each tierce of Butts. Make the brine by dissolving in cold water all the mixed Freeze-Em-Pickle, Sugar and Salt that is left after the Butts are rubbed. Stir well for a minute until it is dissolved, and then pour this brine over the meat. When curing only a small quantity of Butts, cut down the proportions of Freeze-Em-Pickle, Sugar and Salt, also the quantity of water, according to the quantity of Butts to be cured.

Quantity of Brine to Use for Curing 100 lbs. of Butts.

Five gallons by measure, or 42 lbs. by weight, is the approximate amount of water to use for every 100 lbs. of meat.

Tierces, after being packed with 285 lbs. of meat, will hold about 15 gallons of water. When

B. HELLER & CO., CHEMISTS, CHICAGO.

curing Butts in vats or open barrels, whether in small or large quantities, always use not less than 5 gallons of brine to 100 lbs. of meat, as this makes the proper strength and a sufficient brine to cover the meat.

The Use of Molasses and Syrup Barrels.

Never use old molasses barrels, or syrup barrels for curing meat, unless they have been first thoroughly scoured and steamed, and cleansed with our **Ozo**. It is best to use oak tierces, and always be sure that they are perfectly clean and sweet before putting the meat into them to cure.

Shape of Vats.

Sometimes vats of certain shapes require more brine to cover the meat than others, and in such cases, a proportionate amount of **Freeze-Em-Pickle**, Sugar and Salt should be added to the necessary amount of water to make sufficient brine to cover the meat.

How to Overhaul Butts When Curing in Open Packages.

On the fifth day after packing each lot of Butts, it is necessary that they should be overhauled. This must be repeated seven days later; again in ten days, and a final overhauling should be given ten days later. Overhauling Light Butts three times, and Heavy Butts four times while curing, and at the proper time in each instance, is very important, and must never be forgotten, especially when curing with this mild, sweet cure. Overhauling means, to take the Butts out of the brine and to repack them in the same brine. The proper way

B. HELLER & CO., CHEMISTS, CHICAGO.

to overhaul is to take a perfectly clean tierce, set it next to the tierce of Butts to be overhauled, pack the meat into the empty tierce, and then put this same brine over the meat.

How to Cure Butts in Closed up Tierces.

Large packers who employ coopers, should always cure Butts in closed up tierces, as this is the best method known.

FIRST.—Mix the proper proportions of **Freeze-Em-Pickle**, Sugar and Salt, for the different size Butts to be cured. These proportions are given in the foregoing table, under the heading, "Light Weight Butts, and Heavy Weight Butts." If the tierces are to be headed up, use half of the **Freeze-Em-Pickle**, Sugar and Salt, for rubbing the Butts, and the half that is left over after the Butts are rubbed, should be dissolved in the water which is to be used to fill the tierce. Rub each Butt well before packing; put only 285 lbs. of meat in each tierce, and then head them up.

SECOND.—Lay the tierces on their sides and fill them through the bung hole, with water in which the half of **Freeze-Em-Pickle**, Sugar and Salt left over after rubbing, has been dissolved.

THIRD.—Insert the bung and roll the tierces. This will mix and dissolve the **Freeze-Em-Pickle**, Sugar and Salt.

FOURTH.—Overhaul five days after packing; again seven days later, again in ten days, and once more ten days thereafter. At each overhauling, examine each tierce for leaks; if any of the Pickle has leaked out, knock the bung in and refill. Remember to overhaul Light Butts three times, and Heavy Butts four times.

FIFTH.—Overhaul Butts in closed up tierces,

B. HELLER & CO., CHEMISTS, CHICAGO.

simply by rolling the tierces from one end of the cooler to the other. They ought to be rolled at least 100 feet.

Rolled Boneless Ham or Ham Sausage.

After the Butts are thoroughly cured, they should be stuffed in beef bungs; if they are large only one should be stuffed in each casing; if they are small, two can be stuffed together. The casings should be tied off at each end, and then wound with a heavy string, which should be wrapped as tightly as possible. Perforate the casings with a fork so as to let out any air that may be in them; then smoke the Ham Sausages over night in a cool smoke; in the morning boil them in Zanzibar Carbon water, if it is desired to cook them, but if they are to be sold uncooked, dip them in boiling water for five minutes in which enough Zanzibar Carbon has been added to maintain a nice color.

See page 91 for full information in regard to Zanzibar Liquid Ham Smoke. See paragraph on temperature for curing meat on page 35.

HOW TO CURE THE MEAT FOR LUNCH HAM OR NEW ENGLAND PRESSED HAM.

Freeze-Em-Pickle is especially adapted for curing pork trimmings which are used for Berliner Hams, Lunch Hams, Boneless Hams, New England Pressed Hams, etc. It will cure and preserve pork trimmings perfectly, and will give them a rich delicate sugar-cured ham flavor. It does not draw the albumen out of the meat, but the natural binding qualities are retained, and the meat has a rich, red, cured-meat color. Trimmings

B. HELLER & CO., CHEMISTS, CHICAGO.

cured with **Freeze-Em-Pickle** can be kept in cold storage for a year without getting too salty or becoming short and losing their nice flavor and binding qualities.

The following directions must be carefully followed to get the results desired:—

FIRST:—The trimmings should not be larger than an egg, and should be as uniform in size as possible.

SECOND:—Do not run the trimmings through an Enterprise Grinder to cut them up before packing them, as it has a tendency to heat the meat.

THIRD:—Trimmings that are to be held for any great length of time must be as fresh as possible; if they should be somewhat slimy, they should be washed thoroughly in cold common salt brine and allowed to drain until quite dry. Never mix or salt trimmings that become slimy, with fresh ones; always pack them separately.

FOURTH:—It is absolutely necessary that the meat should be thoroughly chilled, and that the packing should be done in the cooler so that the temperature of the meat will not get above the temperature in which it is to be cured.

FIFTH:—For each 100 lbs. of trimmings, take 1 lb. of **Freeze-Em-Pickle**, 2 lbs. of best Granulated Sugar and 4 lbs. of Common Salt, and mix these thoroughly with the meat. Mixing thoroughly is very important; it should be carefully done so as to insure a uniform cure.

SIXTH:—Have the tierces or barrels perfectly clean and sweet; then sprinkle a little salt on the bottom, and fill the barrel or tierce about one-quarter full of salted meat, and pound it down hard with a tamper. Do the same when the barrel is half full and continue in this manner until

B. HELLER & CO., CHEMISTS, CHICAGO.

the barrel is filled. This tamping is done to expel all the air between the pieces of meat, and it is an important factor to insure a uniform cure and color. If the trimmings are to be kept any length of time, it will be necessary that the tierces or barrels should be headed up, and they should always be filled with meat as much as possible. When trimmings are to be used as soon as cured, it is not necessary to head them up, simply put a top on them and weight them down, or cover them with a clean cloth and put a layer of salt two or three inches thick, over the top of the cloth. This will keep out the air and will give good results. The trimmings will be cured in from two to three weeks, and are then in a perfect condition to be made into New England Pressed Hams, etc. They need not be soaked in water, nor need any salt be added as they are ready for instant use just as they are and will have a most delicious sugar-cured ham flavor.

See paragraph on Temperature for Curing Meats on page 35.

HOW TO MAKE NEW ENGLAND PRESSSED HAMS.

After the meat is cured, it should be stuffed in beef bungs and should be smoked about three hours, but this depends upon the smoke house and whether wood or sawdust is used. It may be necessary to smoke the hams still longer. Boil the hams in a temperature of 180 degrees Fahrenheit for $1\frac{1}{2}$ hours, then reduce the temperature to 170 degrees Fahrenheit and remove the hams at the expiration of one hour. After the hams are boiled, they should be laid out on a table in the cooler, and then boards should be placed on

B. HELLER & CO., CHEMISTS, CHICAGO.

top of the hams and the boards should be weighted down with heavy stones.

CURING AND PRESERVING BEEF TRIMMINGS FOR BOLOGNA.

There are seasons of the year when beef trimmings and bull meat can be bought at a very low price. This meat can be very easily packed with **Freeze-Em-Pickle**, and stored in a cooler to be kept until the meat is high; it can then be worked into bologna with the best results. In fact, beef that has been preserved with **Freeze-Em-Pickle** will make better bologna than fresh beef, and the bologna after it is made will keep much better than bologna made with fresh meat.

The large packers make their greatest profit by filling their packing houses when meat is cheap, and keeping it until the prices are high enough to justify them in selling it at a good profit. The small sausage maker should adopt the same means for making money; he should buy his beef trimmings when they are cheap, keep them until they are high and then work them into bologna. There are certain seasons of the year when bulls can be bought at a very low price. They can be trimmed out, and the meat packed with **Freeze-Em-Pickle**. Bull meat preserved with **Freeze-Em-Pickle** and salted for a month or so, will make much finer bologna than fresh bull meat.

DIRECTIONS FOR SALTING BEEF TRIMMINGS.

FIRST:—Trim out the beef and cut it into small pieces to average about the size of potatoes; and then spread the meat on the floor or in pans on racks in the cooler for 24 hours, so that it will become thoroughly chilled.

B. HELLER & CO., CHEMISTS, CHICAGO.

SECOND:—

For Every 100 lbs. { 1 lb. of FREEZE-EM-PICKLE,
of Trimmings use { 4 lbs. Common Salt.

THIRD.—Mix the Freeze-Em-Pickle, Salt and Trimmings together thoroughly, so that some of the Salt and Freeze-Em-Pickle, will be sure to get to all parts of the meat.

FOURTH.—Take perfectly clean tierces, and sprinkle a handful of Salt on the bottom of each tierce and pack the trimmings in them as tightly as possible; the meat should be tamped with a tamper when the tierce is one-quarter full; again when it is one-half full; again when it is three-quarters full, and again when it is full. It must be packed as tightly as possible to prevent the air from getting between the meat. Put a handful of salt over the top of the meat and if the meat is to be kept for six months or a year, it is advisable to put the heads into the barrels, but if it is to be kept for only a few months, simply put a clean cloth over the top of the meat and then put over it a layer, two or three inches thick of dry salt. This will exclude the air and keep the top meat from getting dry and dark. The Beef Trimmings when handled in this way, and stored for some time, will make better bologna than fresh meat, while at the same time, the bologna will keep much longer and give much better satisfaction than if fresh trimmings were used.

Temperature of Cooler for Beef Trimmings.

See paragraph on Temperature for Curing Meats on page 35.

CURING BEEF CHEEKS FOR BOLOGNA.

FIRST:—The cheek meat should be cut out of

B. HELLER & CO., CHEMISTS, CHICAGO.

the heads as soon after the beef is killed as possible, and the gristle should be cut through lengthwise, two or three times. All the fat can also be trimmed off or left on, just as desired; in a large slaughtering establishment, the fat is worth more in the tank than in the sausage.

SECOND:—The cheeks should then be thrown into ice water and allowed to remain there for an hour or two. This will draw out all the slime and blood.

THIRD:—The cheeks should then be spread out thinly on the floor, or put on coarse wire screens, or on perforated galvanized iron pans, in a cooler. They should be spread out as thinly as possible so as to thoroughly drain and chill.

FOURTH:—After they are thoroughly chilled, which will take 24 hours, they should be salted.

DIRECTIONS FOR DRY SALTING BEEF CHEEKS.

Use for 100 lbs. $\begin{cases} 1 \text{ lb. of FREEZE-EM-PICKLE,} \\ \text{Beef Cheek Meat} \end{cases}$ $\begin{cases} 4 \text{ lbs. of Common Salt.} \end{cases}$

FIRST.—Mix the proper quantities of Freeze-Em-Pickle and Salt together in a pail or box, for 100 lbs. of cheek meat, and then thoroughly mix this mixture with the meat.

SECOND:—Take a perfectly clean tierce, sprinkle a handful of salt on the bottom; put the salted cheek meat into the tierce and tamp it down with a tamper as hard as possible.

THIRD:—Continue mixing the same proportions of Freeze-Em-Pickle and Salt to every 100 lbs. of meat to be salted; then keep on packing 100 lbs. into the tierce at one time, tamping down each 100 lbs. until the tierce is entirely filled. The object in tamping it with a tamper is to get all the air out and to close up all the loose cavities

B. HELLER & CO., CHEMISTS, CHICAGO.

in the tierce. The less air space in the tierce, the better the cheek meat will cure and keep.

FOURTH.—If the tierces are to be headed up, sprinkle a handful of salt on the tops of the tierces and put in the heads, being careful that the tierces are as full as possible before the heads are put in.

FIFTH:—If the tierces are to remain open, they can be covered with a clean cloth and a layer of about two or three inches thick of dry salt should be put over the top of the cloth. This will exclude the air and keep the top meat from getting dry and dark.

SIXTH:—Cheek meat that has been properly chilled and packed in this manner can be kept for any length of time and need not be overhauled. It can be kept for a year or longer and whenever it is taken out of the barrel and used, it will make the finest kind of bologna with a beautiful color and a delicious flavor. Dry salted cheek meat makes much better bologna than the pickled cheek meat. Sometimes cheeks are very low in price, and they can be packed and stored as above directed and kept until the market advances; by this method quite a sum of money can be made each year.

SEVENTH:—See paragraph on Temperature for Curing Meats on page 35.

CURING BEEF AND PORK HEARTS FOR BOLOGNA AND OTHER SAUSAGE.

FIRST:—As soon as the beef or hog is slaughtered, the hearts should be cut open; the pork hearts should be cut into four squares, and the beef hearts into six or eight pieces, being sure to cut

B. HELLER & CO., CHEMISTS, CHICAGO.

them so that all the crevices are open and exposed. They should then be placed in ice water in which they should be allowed to remain for two to three hours.

SECOND:—Spread the hearts on the floor, or in trays on racks in a cooler as thinly as possible, and allow them to chill for 24 hours; they must be thoroughly chilled so that all animal heat leaves them.

Use for 100 lbs. of Beef or Pork Hearts $\left\{ \begin{array}{l} 1 \text{ lb. of FREEZE-EM-PICKLE,} \\ 4 \text{ lbs. of Common Salt.} \end{array} \right.$

THIRD:—Mix the proper quantity of Freeze-Em-Pickle and Salt together in a pail or box, for 100 lbs. of hearts, and then thoroughly mix this mixture with the cooled hearts.

FOURTH:—Take a perfectly clean tierce, and sprinkle a handful of salt on the bottom; put the salted hearts into the tierce and tamp them down with a tamper as hard as possible.

FIFTH:—Continue mixing the same proportions of Freeze-Em-Pickle and Salt to every 100 lbs. of hearts; then pack them into the tierce tamping down each 100 lbs. until the tierce is entirely filled. The object in tamping with a tamper is to get all the air out and to close up all the cavities in the barrel. The less air cells in the barrel, the better the hearts will cure and keep.

SIXTH:—If the tierces are to be headed up, sprinkle a handful of salt on top of the tierces and put in the heads, being careful that the tierces are as full as they possibly can be before the heads are put in, and also that the tierces are perfectly sweet before packing.

SEVENTH—If the tierces are to remain open, they can be covered with a cloth and about two or three handfuls of dry salt should be put over the

B. HELLER & CO., CHEMISTS, CHICAGO.

top of the cloth. This will exclude the air, and will keep the top meat from getting dry and dark.

EIGHTH:—Hearts that have been properly chilled and packed in this manner can be kept for any length of time and need not be overhauled. They can be kept for a year or longer, and whenever taken out of the tierces to use, they will make the finest kind of bologna and such sausage as hearts can be used for. Quite a quantity of properly cured hearts can be used in the manufacture of sausage with very good results. They will have a beautiful color and a delicious flavor. Hearts should never be pickled for bologna, but should always be dry salted as above directed. It is very often the case that hearts can be bought at a small cost when the market is low, and if so purchased and packed and stored as herein directed until the market advances and meat is high, they can be made into bologna with a very handsome profit.

NINTH:—See paragraph on Temperature for Curing Meats on page 35.

DIRECTIONS FOR MAKING BOLOGNA.

For 100 lbs of Bologna take:—

60 lbs. of Beef Trimmings,
10 lbs of Pork Trimmings,
5 lbs. of Pork Speck, (Back Fat)
2 lbs. Bull-Meat Flour,
3½ lbs. of Salt,
1 lb of Prepared Bologna Seasoning,
2 oz. of Rosaline Berliner Konservirungs-Salze.
25 lbs. of Cold Water.

This will make 100 lbs. of elegant bologna.

FIRST:—Salt the pork and beef trimmings a day or two ahead, using from three to four lbs. of salt to 100 lbs of meat and 1 lb. of Freeze-Em-Pickle.

SECOND:—When making bologna use the pork and beef in the proportions as stated above and

B. HELLER & CO., CHEMISTS, CHICAGO.

when about half chopped add the speck (or fat).

THIRD:—After adding the fat, add sufficient salt so as to have $3\frac{1}{2}$ to 4 lbs. to 100 lbs. of finished bologna and add 1 lb. of Prepared Bologna Seasoning.

FOURTH:—Take half of the 25 lbs. of water which is to be added to the bologna and mix into it the 2 lbs. of **Bull-Meat Flour** then work it into the meat.

FIFTH:—Take the balance of the 25 lbs. of cold water and dissolve 2 oz. of Rudolph Gebhard's Rosaline Berliner Konservirungs-Salze in a cup of hot water and add it to the cold water; then add this red water to the 75 lbs. of meat in small quantities, little by little, until all of the 25 lbs. has been added. If the water is added in small quantities at a time, the meat and **Bull-Meat Flour** will absorb all of the 25 lbs., but should all or even one-half of the water be added at once, the meat will not absorb it as it otherwise would.

SIXTH:—If a garlic flavor is desired, add one tablespoonful of **Vacuum Garlic** to the meat while it is being chopped. The **Vacuum Garlic** is the best Garlic to use, as it does not give an aftertaste or leave an offensive odor on the breath.

SEVENTH:—After the meat is chopped to the proper fineness, stuff in beef rounds, beef bungs or middles, and boil round bologna 30 minutes in water 160 degrees hot, and long bologna from 45 to 60 minutes according to their thickness. If large bologna is desired, stuff the meat in beef bung casings and cook them from $1\frac{1}{4}$ to $1\frac{1}{2}$ hours in water 155 degrees hot; vary the time according to the thickness of the sausage.

EIGHTH:—Always add **Zanzibar Carbon** to the water in which bolognas are boiled, as it dries the

B. HELLER & CO., CHEMISTS, CHICAGO.

casings and preserves them, and produces a beautiful smoke color which will be lasting.

A book on Coloring and Smoking Meats with Zanzibar Carbon will be sent to anyone free for the asking.

HOW TO ADD WATER TO MEAT.

The secret in getting a large quantity of water into the meat depends entirely upon the way that the water is added. A large quantity of water can be added to a block of meat by putting in two or three pounds at a time while the meat is being chopped, and having it thoroughly absorbed before more is added; however, it would be found impossible to add a large quantity of water to the meat if it were all put in at once. By adding the water in small quantities, at a time, the meat will absorb it and remain firm and doughy, but if it were all added at once, the meat would be soft and spongy.

FRANKFORT SAUSAGE.

Frankfort Sausage is made in most cases in exactly the same manner as bologna with the exception that it is chopped very fine and Frankfort Sausage Seasoning is used. To make extra fine Frankfort Sausage use two parts of beef and one part pork, and add a tablespoonful of ground mace to every 100 lbs. of meat, in addition to the seasoning.

If veal is used in Frankfort Sausage, it improves it considerably, but the price of veal is so high that it is very seldom used. Stuff in sheep casings and smoke lightly, then dip them in hot water for five minutes in which Zanzibar Carbon has been

B. HELLER & CO., CHEMISTS, CHICAGO.

added. Dipping them in hot water swells them and takes out all the wrinkles. After they have been dipped, pour a pail of hot water over them to wash off all adhering grease; then dip them for a minute or two in ice water to cool. This will make them contract so rapidly that they cannot wrinkle or shrink; then put in a cooler to hang up and cool.

WHY WOODEN TANKS ARE BETTER THAN IRON TANKS FOR BOILING SAUSAGE WHEN COLORING IS USED.

In boiling Frankfort Sausage, Bologna, Boneless Hams, etc., as a rule, coloring is used in the boiling water. A certain amount of grease always comes to the top of the water and floats; this grease always takes on a quantity of color. When the sausages are taken out of the water, a portion of this colored grease will run onto the casings and adhere to them. When the sausages are cool, this colored grease rubs off which makes them look smeary, while they color anything they come in contact with; therefore, it is advisable if it can be done, to always skim off the top of the kettle before removing the sausages. This skimming of the fat cannot always be done, because the sausages are in the way, and where iron kettles are used, this colored grease adheres to the sides of the kettle and smears onto the sausages while they are being boiled. It is almost impossible to get this grease off, and clean the kettles except by scouring them with a strong soda solution, or with B. Heller & Co.'s **Ozo**, every time the kettles are empty. On the other hand, when wooden vats are used, the wood becomes water-soaked,

B. HELLER & CO., CHEMISTS, CHICAGO.

and the colored grease will not adhere to it at all, but will slip off the same as water will from an oily surface. Therefore, we recommend the use of wooden tanks instead of iron ones for boiling sausages with color. They can be kept much cleaner and much neater than iron tanks and the sausages will look much cleaner and brighter.

DIRECTIONS FOR MAKING PORK SAUSAGE.

Take 100 lbs. of Pork Trimmings, and while chopping, add:—

2 lbs. of Bull-Meat Flour,
3 lbs. of Salt,
1 lb. of Prepared Pork Sausage Seasoning,
2 oz. of FREEZE-EM;

then, little by little, add 25 to 50 lbs. of cold water depending upon the season of the year.

This will make a most delicious Pork Sausage. By adding Freeze-Em, we guarantee that the Sausage will keep in a fresh, sweet condition, and that it will retain its fresh color.

Bull Meat Flour makes a great improvement in pork sausage. It absorbs the grease so that when the sausage is fried, it keeps all of the juice and fat of the meat within it creating a most delicious and appetizing flavor. It also makes Pork Sausage easier to digest. Pork Sausage made with it can be eaten and relished by people who cannot eat pork in any other way.

HOW TO CURE MEAT FOR HEAD CHEESE.

All meat for head cheese can be cured in the same kind of brine that is used for Corned Beef. See directions for curing Corned Beef page 22. The only fresh meat that should be used in making Head Cheese is fat pork and it should have a nice, white, fat appearance.

B. HELLER & CO., CHEMISTS, CHICAGO.

DIRECTIONS FOR MAKING HEAD CHEESE.

The proper meat to use for making Head Cheese is pickled meat, but it can also be made of fresh meat if it is desired. Head Cheese made of pickled meat is much better and will keep longer than that made of fresh meat.

FIRST:—Cure the heads in a 60 degree brine from 10 to 14 days. Make the brine as follows:—

1 lb. of **FREEZE-EM-PICKLE**,
8½ lbs. of Salt,
5 gals. of Water.

SECOND:—Boil the heads slowly, and long enough so that the meat can be easily stripped from the bone.

THIRD:—Boil the hog rinds and the hog fat in nets at the same time as when boiling the heads. When the rinds are almost cooked through, remove them from the kettle and chop or grind them fine. The fat when cooked, should be cut up into $1\frac{1}{4}$ to $1\frac{1}{2}$ inch square blocks.

FOURTH:—Also boil about 15 lbs. of cured hog tongues, and when they are cooked, cut them in strips.

FIFTH:—The proper proportions for making good Head Cheese are as follows; but, the quantity of the different kinds of meat can be varied according to the stock on hand:—

10 lbs. of Fresh Hog Back Fat,
15 lbs. of Cured Hog Tongues,
25 lbs. of Hog Rinds,
60 lbs. of Cured Hog Head Meat (after removal from bone),
2 lbs. of Bull-Meat Flour,
1 lb. of Prepared Head Cheese Seasoning,
1 lb. of Rudolph Gebhard's White Berliner Kon-servirungs-Salze.

If any salt is needed add sufficient to suit the taste. If the meat is fully cured, no salt need be added.

SIXTH:—The 60 lbs. of head meat must be cut

B. HELLER & CO., CHEMISTS, CHICAGO.

into small pieces $\frac{1}{2}$ or $\frac{3}{4}$ inch in size either by hand or by machine.

SEVENTH:—The rinds must be cut fine; the finer the better.

EIGHTH:—The Tongues must be cut into strips. The more Tongues used, the better will be the Head Cheese.

NINTH:—Mix thoroughly together the Tongues, Rinds, Head Meat, Bull-Meat Flour, the Prepared Head Cheese Seasoning and Konservirungs-Salze. At the same time, mix into the meat as much of the water in which the meat was boiled as the meat will absorb while being mixed. This boiling water contains the gelatine which will help to bind the meat.

TENTH:—After these are all mixed, stuff in beef bungs or hog stomachs and boil in water 155 degrees hot until they are cooked through; this will require one to one and one-half hours depending upon the thickness of the sausages.

ELEVENTH:—When cooked, remove from the kettle and place in cold water until they are properly cooled; then lay them on boards and press them down by putting boards over the Head Cheese with weights on them. Head Cheese is sometimes smoked after it is pressed; or it may be dipped in Zanzibar Liquid Ham Smoke which will give it a fine smoke flavor.

TWELFTH:—Rub the Head Cheese the following day with Rudolph Gebhard's White Berliner Konservirungs-Salze in order to prevent them from getting slimy.

DIRECTIONS FOR MAKING LIVER SAUSAGE.

Take 70 lbs. of Hog Livers, 25 lbs. of Pork Necks; the entire head can be used instead of the necks,

B. HELLER & CO., CHEMISTS, CHICAGO.

or the trimmings which are cut from bellies will work into Liver Sausage very nicely.

FIRST:—Scald the Livers by pouring boiling hot water over them or dip them into boiling water until they are scalded through to the center. Then throw them into ice water or put them into a tub of cold water and allow the water to run into the tub until the Livers are cooled through to the center, otherwise, they might sour in a short time.

SECOND:—Cook the Hog Necks, Heads or Bellies and remove all the meat from the bone.

THIRD:—Chop the meat as fine as possible. When an Enterprise Grinder is used, grind the meat as fine as it can be ground through a fine plate; then add the Livers, which have also been ground as fine as it is possible to get them. The finer and better the Livers and Fat are ground, the finer and better will be the Liver Sausage.

FOURTH:—When grinding, add to 100 lbs. of Sausage:—

2 Large Size Onions,
3½ lbs. Bull-Meat Flour,
1 lb. of Prepared Liver-Sausage Seasoning,
½ lb. of Rudolph Gebhard's White Berlin-
er Koneervirungs-Salze.

All of these should then be well mixed, and as much of the water in which the meat was boiled, should be added to the mixture as the meat will absorb.

FIFTH:—Stuff very loosely into hog or beef casings, and boil very slowly, otherwise, they will burst; never have the hot water hotter than 155 degrees. The length of time to boil is $\frac{1}{2}$ to $1\frac{1}{2}$ hours which will depend entirely upon the thickness of the sausage.

SIXTH:—After they are boiled, place in ice water in which they should be kept until they have been

B. HELLER & CO., CHEMISTS, CHICAGO.

chilled through to the center; then remove them from the water and place in the cooler. After the sausages are chilled rub the casings with some White Berliner Konservirungs-Salze, if you wish to prevent the sausage from getting slimy.

DIRECTIONS FOR MAKING BRAUNSCHWEIGER LIVER SAUSAGE.

Braunschweiger Liver Sausage is made of neck pieces from lean hogs, hog livers, gut fat, trimmings from bellies and back fat, all of which must be steamed before being chopped. For 150 lbs., or less amounts in the same proportion, take:—

10 lbs. of Gut Fat,
30 lbs. of Belly Trimmings,
20 lbs. of Back Fat,
40 lbs. of Neck Pieces,
50 lbs. of Hog Livers.

FIRST:—Take the above quantities, put them into a kettle and steam them at about 180 degrees to 190 degrees until the meat is tender. Care must be taken that the water does not boil. It should not be hotter than 190 degrees or just enough agitated to make it simmer.

SECOND:—Separate the livers from the other meat that has been steamed and chop it or grind it fine.

THIRD:—Take all of the other meat out of the kettle, strip it from the bones and rinds, put it in a chopper or grinder, and chop, rock or grind fine. While chopping, add:—

3 Large Size Onions,
5 lbs. of Bull-Meat Flour,
1½ lbs. of Prepared Liver Sausage Seasoning,
½ lb. of Rudolph Gebhard's White Berliner
Konservirungs-Salze,

and as much of the soup in which the meat was steamed as the meat will absorb.

FOURTH:—Then put all of the chopped meat,

B. HELLER & CO., CHEMISTS, CHICAGO.

including the livers, into a trough and mix all the meat thoroughly, adding as much more of the soup while mixing, as the mixture will absorb.

FIFTH:—Stuff loosely into hog middles or hog bungs, and boil very slowly, otherwise they will burst; boil them until they are filled and swell out. Never have the hot water hotter than 155 degrees. The length of time to boil is $\frac{1}{2}$ to $1\frac{1}{2}$ hours, which will depend entirely upon the thickness of the sausage.

SIXTH:—After they are boiled, place in cold water in which they should be kept until they have been fully chilled through to the center, but while chilling the sausages must be turned frequently to keep the grease from congealing to one side; then remove from the water, and place in a cooler. After the sausages are chilled, rub the casings with some White Berliner Konservirungs-Salze, if you wish to prevent the sausages from getting slimy.

DIRECTIONS FOR MAKING BLOOD SAUSAGE.

To make 100 lbs of Blood Sausage, use the following proportions which we will call Formula, No. 1:—

20 lbs. of Cheek Meat, either fresh or salted,
15 lbs. of Hearts, either fresh or salted,
15 lbs. of Pork Rinds, either fresh or salted,
20 lbs. of Pork Speck (back fat), either fresh
or salted,
25 lbs. (3 gallons) of Hog or Beef Blood,
2 lbs. of Bull-Meat Flour,
1 lb. of Prepared Blood Sausage Seasoning,
3 $\frac{1}{4}$ lbs. of Salt,
2 oz. of FREEZE-EM.

Salted meat is preferable in making Blood Sausage but fresh meat can be used if desired.

FIRST:—Take 25 lbs. of fresh Hog or Beef Blood, to which add 2 oz. of Freeze-Em, and stir until

B. HELLER & CO., CHEMISTS, CHICAGO.

the blood remains thin and will not congeal. The Freeze-Em will preserve the blood and sausage when it is finished.

SECOND:—Put the Pork Rinds in a pudding net and boil until about three-quarters done. Care must be taken not to boil them too long, otherwise they will become too pulpy when boiled the second time in the sausage.

THIRD.—Boil the Cheek Meat and Hearts until done. The Cheek Meat and Hearts should be boiled as slowly as possible. The slower the boiling the better will be the Sausage.

FOURTH.—After they are cooked, put the Pork Rinds in a chopper or Enterprise grinder and cut them as fine as possible. The finer the better. After the Cheek Meat and Hearts have been cooked, they should be cut up coarse by hand, or chopped coarse in a chopper.

FIFTH:—The Pork Back Fat must be scalded by pouring boiling water over it for a few minutes. It should then be cut into small square cubes by hand or with a pork back fat cutting machine.

SIXTH:—After the meat and fat are all cut, add to it:—

25 lbs. of Blood,
2 lbs. of Bull-Meat Flour,
1 lb. of Prepared Blood Sausage Seasoning,
3½ lbs. of Salt,

if the meat is fresh, but if the meat is salted, only add two lbs. of salt.

SEVENTH:—Mix these thoroughly and stuff into beef bungs, beef middles or rounds. Fill the casings only three-quarters full.

EIGHTH:—Blood Sausage should be boiled very slowly, the water should not be hotter than 155 degrees. The length of time for boiling depends entirely upon the thickness of the sausage. When

B. HELLER & CO., CHEMISTS, CHICAGO.

done, the sausage will float on top of the water and will be firm and plump. It will be necessary to prick the casings when boiling to let out the air.

NINTH:—When the Sausage is cooked through, remove it from the kettle and place it in cold water; ice water is the best. Allow it to remain in this cold water until it is thoroughly cooled. Then, place on a board in a cooler and allow it to remain there 24 hours before cutting.

TENTH:—It is always advisable to use pickled or dry-salt cured cheek meat and hearts for Blood Sausage instead of fresh ones. If you wish to cure them especially for Blood Sausage, they should be cured in a 45 to 50 degree brine made with **FREEZE-EM-PICKLE**, for two weeks before being made into sausage. Some prefer to grind the hearts fine, and leave the cheeks coarse, and if this is preferred, they can be ground with the pork rinds.

ELEVENTH:—To keep the casings from becoming slimy and sticky soak them for a few minutes before they are stuffed, in a pail of water to which add one tablespoonful of **FREEZE-EM**.

The following is Formula No. 2, for making 100 lbs. of Blood Sausage:—

30 lbs. of Pork Speck (back fat),
35 lbs. of Pork Snouts or Ears,
30 lbs. of Hog or Beef Blood,
2 lbs. of Bull-Meat Flour,
1 lb. of Prepared Blood Sausage Seasoning,
3½ lbs. of Salt,
2 oz. **FREEZE-EM**.

Cook and handle Formula No. 2 the same as Formula No. 1, with the exception of leaving out the hearts and cheek meat.

DIRECTIONS FOR MAKING TONGUE BLOOD SAUSAGE.

Tongue Blood Sausage is made the same as

B. HELLER & CO., CHEMISTS, CHICAGO.

either Formula No. 1 or Formula No. 2 with the exception that Pickled Hog Tongues are added to it. The more Tongues used, the better will be the sausage. Always use Tongues that have been thoroughly cured as they will have a nice red appearance in the sausage. Boil the Tongues until they are done and then cut into strips and mix into the sausage at the same time as the blood is added.

DIRECTIONS FOR MAKING SUMMER SAUSAGE. (CERVELAT.)

Use 70 lbs. of Pork Trimmings,
20 lbs. of Lean Beef,
10 lbs. of Pork Back Fat.

FIRST:—Before being made into sausage, the back fat must first be dry salted for two weeks in order to get it properly cured and firm.

SECOND:—After the pork back fat has been dry salt cured, it should be cut up into small pieces of about one-half inch square.

THIRD:—The beef should be first finely chopped; then the pork trimmings should be added and then the pork back fat. All should be chopped until fine and while it is being chopped add:—

3 lbs. of Salt,
2 to 3 oz. of Rosaline Berliner Kon-
servirungs-Salze,
8 oz. of the Best Granulated Sugar,
8 oz. of Finely Ground Pepper.

FOURTH.—When the meat is chopped, it should be packed tightly in pans or boxes, which should be placed in a cooler having a temperature of about 40 degrees; these pans or boxes should hold about 50 lbs. and should be shallow, not over six to eight inches deep, so that the meat can be thoroughly chilled through. The meat in these pans or boxes should remain in the cooler

B. HELLER & CO., CHEMISTS, CHICAGO.

from 4 to 6 days before it will be ready to stuff into the casings.

FIFTH:—Stuff the sausage into hog bung casings or beef middle casings and hang them in a dry room in a temperature of about 45 to 55 degrees for two or three weeks.

SIXTH:—They can then be smoked and are ready for the market. See **Zanzibar Liquid Ham Smoke**, page 91.

DIRECTIONS FOR MAKING ITALIAN SALAMI SAUSAGE.

Take 60 lbs. of Pork Trimmings,
20 lbs. of Lean Beef,
20 lbs. of Pork Back Fat,

FIRST:—Before being made into sausage, the back fat must first be dry salted for two weeks in order to get it properly cured and firm.

SECOND:—Chop the pork trimmings and the beef quite coarse, coarser than for Summer Sausage, and when it is partly chopped, add the pork back fat. Salami must be made fatter than Summer Sausage. One tablespoonful of Vacuum-Garlic should be added to the meat while it is being chopped to give it a delicious Garlic flavor. See page 90. The quantity may be varied in the above preparations according to the demands of the trade.

THIRD:—When the meat is chopped, it should be packed tightly in pans or boxes, which should be placed in a cooler having a temperature of about 40 degrees; these pans or boxes should hold about 50 lbs. and should be shallow, not over six to eight inches deep, so that the meat can be thoroughly chilled through. The meat in these pans or boxes should remain in the cooler

B. HELLER & CO., CHEMISTS, CHICAGO.

from 4 to 6 days before it will be ready to stuff into casings.

FOURTH:—Stuff the sausage into hog bung casings or beef middle casings and hang them in a dry room in a temperature of about 45 to 55 degrees for two or three weeks.

FIFTH:—They can then be smoked and are ready for the market. See **Zanzibar Liquid Ham Smoke** page 91.

DIRECTIONS FOR MAKING HOLSTEIN SAUSAGE.

Take 50 lbs. of Pork Trimmings,
40 lbs. of Beef Trimmings,
10 lbs. of Pork Back Fat.

FIRST:—Before being made into sausage, the back fat must first be dry-salted for two weeks in order to get it properly cured and firm.

SECOND:—Put the beef into the chopping machine and while chopping it add:—

3 lbs. of Salt,
1 lb. of FREEZE-EM-PICKLE,
3 oz. Rosaline Berliner Konservirungs-
Salze,
8 oz. of Granulated Sugar,
8 oz. Finely Ground White Pepper,
8 oz. of Finely Ground Coriander Seed,
and a very small quantity of VACUUM-
GARLIC.

Let the beef cut up about one-half done before adding the pork; then let the pork and beef cut up some before adding the square cut pieces of pork back fat.

THIRD:—After the meat is chopped and spiced, put it in shallow boxes or pans not over eight inches thick, and put it in a good cooler. Keep the meat in a cooler for from 4 to 6 days so it is thoroughly cured before it is stuffed.

FOURTH:—Stuff in beef round casings and let the sausage hang in a dry room at 45 to 55 degrees of temperature for a week.

B. HELLER & CO., CHEMISTS, CHICAGO.

FIFTH:—Give them a cool smoke and they are ready for the market. See **Zanzibar Liquid Ham Smoke**, page 91.

DIRECTIONS FOR MAKING POLISH SAUSAGE.

Take:—50 lbs. of Pork Trimmings,
40 lbs. of Beef Trimmings,
10 lbs. of Pork Back Fat.

Before being used in the sausage, the pork back fat should be dry-salt cured for at least two weeks or it can be cut from dry salt sides.

FIRST:—Cut up the pork back fat into square half inch cubes by hand or with a pork back fat cutting machine.

SECOND:—Chop the pork trimmings, beef trimmings and pork back fat quite coarse, and while being chopped add;—

3 lbs. of Salt,
1 lb. of **FREEZE-EM-PICKLE**,
8 oz of Ground Pepper,
1 tablespoonful of **VACUUM-GARLIC**.

THIRD:—After the pork trimmings and pork back fat have been chopped, and then mixed with the salt, **Freeze-Em-Pickle** and **Vacuum-Garlic**, stuff into beef round casings.

FOURTH:—After the sausage has been stuffed into casings place them in the smoke house and thoroughly smoke, or they can be dipped into our **Zanzibar Liquid Ham Smoke** which will give them a delicious smoke flavor without the use of smoke house or fire. See page 91. This Polish Sausage should not be boiled. Rosaline Berliner Konservirungs-Salze can be used in Polish Sausage to give it a bright, red color.

SWEDISH SAUSAGE.

Take 60 lbs. of Beef. (Boneless Chucks, Briskets and Shank Meat can be used.)
30 lbs. of Pork Ham Trimmings,
10 lbs. of Back Fat.

B. HELLER & CO., CHEMISTS, CHICAGO.

FIRST:—Before being made into sausage, the back fat must first be dry-salted for two weeks in order to get it properly cured and firm.

SECOND:—Cut up the pork back fat into square half-inch cubes by hand or with a pork back fat cutting machine.

THIRD:—Put the beef and pork on the block and when partly or coarsely chopped add the cubes of back fat, and when the beef and pork are cut fine, the pork back fat should show prominently through the meat. While it is being chopped add:—

3 lbs. of Salt,
2 to 3 oz. of Rosaline Berliner Konservirungs-Salze,
8 oz. of the Best Granulated Sugar,
8 oz. of Finely Ground Pepper.

Adding two tablespoonfuls of Zanzibar Liquid Ham Smoke will give the sausage that spicy smoke flavor characteristic of all imported Swedish Sausage.

FOURTH:—After chopping fine, put the meat in a trough and knead it until it is tight and hard.

FIFTH:—Pack the meat tightly in 50 lb. pans or boxes which place in a cooler having a temperature of about 40 degrees; these pans or boxes should be shallow, not over 6 to 8 inches deep, so that the meat can be thoroughly chilled through. The meat in these pans or boxes should remain in the cooler 4 to 6 days before it will be ready to stuff into the casings.

SIXTH:—Stuff the sausage into beef middles and hang them in a dry room in a temperature of about 45 to 55 degrees for two or three weeks.

SEVENTH:—They can then be smoked, and are ready for the market.

DIRECTIONS FOR MAKING SOUSE.

FIRST:—Take nicely cleaned pig's feet, pig's

B. HELLER & CO., CHEMISTS, CHICAGO.

snouts, hocks or ears, and put them in a kettle on a stove, or fire or in a steam jacket kettle.

SECOND:—Add just enough cold water to entirely cover them.

THIRD:—Boil until the meat can be removed from the bones.

FOURTH:—Remove the meat from the bones, and put it back into the water in which it was boiled; then add to this water enough White Wine Vinegar to give it a nice sour taste. The quantity of Vinegar will depend upon its strength. Be sure to use enough to give it a nice taste.

FIFTH:—Add the following proportions of spice, which can be changed to suit the amount of Souse you are making. For 100 lbs. of Souse use:—

2 lbs. of Granulated Sugar,
1 lb. of Whole Black Pepper,
20 Bay Leaves broken up,
12 Cloves.

SIXTH:—Mix the spice with the meat, and boil about 15 minutes; then remove from the fire. Put the Souse into square tin pans, and allow it to set 24 hours before removal. If desired a lemon and onion may be cut into small pieces, and mixed in the Souse just before putting it in the pans to cool; some like this, and some prefer it without onion or lemon. Do not use too much lemon as it will make the Souse bitter.

PICKLED PIGS FEET.

First, cure the feet in brine 100 degrees strong from four to five days, using 1 lb. of Freeze-Em-Pickle to every 5 gallons of brine. This brine can be used over and over again for curing pigs feet until it becomes thick from the gluey substance in the feet. Sometimes it remains good and can be used for a year. After the feet have been cured for four or five days cook them as follows:— Make

a kettle of water boiling hot; then throw the pigs feet into it and keep the heat on until the water begins to boil; then check the fire or steam, and simply let the water simmer just as slowly as you possibly can until the feet are nicely cooked. The slower they cook, the better, and they ought to remain in the hot water for about four hours, when cooked at a low temperature. When they are cooked through, turn on cold water and let the water overflow until all the heat is out of them, and nothing but cold water overflows, and then let the feet cool well. Split the feet through the center and pack them. If they are to be packed in tierces and kept on hand for any length of time, the vinegar that is put over them should be 60 grains strong but when they are packed in small packages for immediate use 40 grains is strong enough.

MIXED SPICE FOR PICKLED PIGS FEET.

4 lbs. of Whole Coriander Seed,
1½ lbs. of Whole Black Pepper,
¼ lb. of Whole Cloves,
½ lb. of Whole Mustard Seeds,
4 lbs. of Allspice,
½ lb. of Whole Small Red Peppers.

When packing the feet throw a little of the mixed spice over the top of them, also a few bay leaves. There are certain seasons of the year when pickled pigs feet are in great demand, while there are other seasons when they are a slow sale. We, therefore, give here a formula for keeping pickled pigs feet in vinegar so they can be kept for one year if necessary in a perfect condition. Salt, cure and boil the pigs feet the same as above but instead of boiling them finished, boil them about half through; then split them and put them in tierces and fill the tierces with 60 grain vinegar

B. HELLER & CO., CHEMISTS, CHICAGO.

and store in cold storage. The 60 grain vinegar has a tendency to soften the meat. After they have been in this strength of vinegar for any length of time, they will become soft just as if they were thoroughly cooked, but if it is necessary to use them before they are soft, roll them into the engine room or in a place where it is very warm, and turn the tierces on their end next to the boiler. Keep the top of the barrel covered with water. we mean on the top of the head so that the head will not dry. The bottom of the barrel will not shrink and dry because the vinegar on the inside keeps it moistened, but if the top is not kept wet the barrel will shrink and begin to leak. By allowing the pigs feet which are packed in strong vinegar to remain in a very warm place for a week or so, they will become nice and tender; they are then to be repacked with 40 grain vinegar in small packages for the market.

VINEGAR PICKLED PIGS TONGUES.

Take salted Pigs Tongues that have been cured for 30 days and scald them in hot water; then remove the skin and gullet. Boil slowly for three hours, the slower the better, and cool the same as pigs feet. Another way is to take them out of the brine and cook them, and then take off the skin and gullet after they are cooked. When handling large quantities, this latter method will not work as well as the first method, because the skin will remove much easier while they are hot, but those who prefer to do so can cool the tongues, pull off the skin and cut off the gullet. Split the tongues through the center, pack in vinegar the same as pigs feet and spice them in the same manner.

HOW TO GIVE BOILED HAMS A DELICIOUS SMOKE FLAVOR.

It is very often the case that packers do not smoke boiled hams long enough to give the meat the proper flavor, and sometimes they are not smoked at all. In order to give cooked hams a delicious smoke flavor, we manufacture **Zanzibar Liquid Ham Smoke** which is a flavor that can be put in the water when the hams are boiled. **Zanzibar Liquid Ham Smoke** is a liquid made by distillation from purely vegetable matter which gives meat a most delicious, spicy, sweet hickory smoke flavor. Full information in reference to this preparation will be found on page 91.

TEMPERATURE FOR SCALDING HOGS.

For scalding hogs the temperature of water should be 150 degrees Fahrenheit. Great care should be taken not to get the water too hot. A temperature above 150 degrees, especially if it reaches the boiling point is a great injury to the skin and will set the hair. All the dirt and filth of the hog are contained in the outer cuticle, which when scraped, should come off with the hair. If the water is too hot, this dirt and even the outer cuticle itself burns into the skin leaving it discolored and unattractive. When care is taken to have the water the correct temperature, the hide will be uniform in color and free from all blotches.

When ordering our goods insist upon having the genuine— See that our name, **B. HELLER & CO.** is on every package. Accept no Substitute.

Freeze-Em

The Greatest of All Preservatives. Keeps chopped beef and all kinds of fresh meat fresh without ice.

We guarantee that if Freeze-Em is not found exactly as represented, to cheerfully refund your money.

We guarantee Freeze-Em to be entirely harmless to the human system.

We guarantee that Freeze-Em will keep fresh meats fresh. It will not make spoiled meat good.

No article ever put before the butchers' trade has acquired such prestige and given such satisfaction, as this remarkable preparation. It is in use all over the United States and Canada and many foreign countries. Its great prestige has induced many worthless imitations of which the public should be aware. These imitations are in similar packages and often have similar names.

When ordering Freeze-Em specify Freeze-Em, Manufactured by B. Heller & Co., Chemists, Chicago, and add to your order, "Send no Other."

PRICE LIST

5 lb. bottles	per lb.	\$.50
30 lbs. $\frac{1}{2}$ Dozen	per lb.	.48
60 lbs. 1 "	per lb.	.46
120 lbs. 2 "	per lb.	.44
240 lbs. $\frac{1}{2}$ Gross	per lb.	.42
360 lbs. $\frac{1}{2}$ "	per lb.	.41
720 lbs. 1 "	per lb.	.40



B. HELLER & CO., CHEMISTS, CHICAGO.

Rudolph Gebhard's

ROSALINE BERLINER KONSERVIRUNGS-SALZE.

Is the only thoroughly reliable coloring manufactured for coloring, curing and preserving Bologna, Frankforts, Summer Sausage, etc. It colors cures and preserves all at the same time, and makes a natural, bright, fresh meat color. It thickens the albumen in the meat, making it like jelly. When the meat is short and will not bind, it will remedy it. Two ounces will color, cure and preserve one hundred pounds of meat. It produces a more juicy and finer flavored sausage.



White Berliner Konservirungs-Salze.
This is a most reliable preservative. It has been put to the severest tests in all climates under all conditions and is positively guaranteed to prevent decomposition and fermentation. It fully conforms to all Food Law requirements.



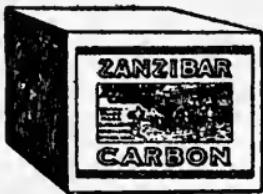
Veal, Game, Poultry, Tenderloins, Fish, Oysters, Clams, Lobsters, Shrimp, Lard, Sausage Casings, Butter, Oleomargarine, Cheese, Salt Codfish, Eggs, Buttermilk, Ice Cream, etc. It prevents skippers on meat and is guaranteed perfectly harmless and not in the least injurious to health.

PRICE LIST

Put up in one lb. packages, and packed 15, 25 and 50 to the case. In quantities less than 150 lbs. either or both kinds assorted, per lb. \$0.27. In quantities of 150 lbs. or over, either or both kinds assorted, per lb. \$0.24.

Zanzibar Carbon

The First and Only Original Color for Bologna, Frankforts, Smoked Pork Sausage, Summer Sausage, Hams, Bacon, Dried Beef, etc., to which it gives an attractive smoke appearance.



Zanzibar Carbon produces a much finer, richer and better fresh smoke color than by coloring in the old way by smoking. It answers all the requirements of the old and has many advantages of its own.

We guarantee that Zanzibar Carbon is non-poisonous; that it does not rub off; that it prevents mould on meats and sausage; that it is the only color that works well on Hams and Bacon; that it hardens the casings of Bologna and Frankforts; that it does not puff the casings; that it produces an attractive appearance; that it will keep off skippers and that it prevents shrinkage.

Be sure to get the genuine Zanzibar Carbon, and take no other.

PRICE LIST

20 oz. cans	-----	\$0.07½ per oz.	-----	per can	\$ 1.50
5 lb. "	-----	.90	" lb.	" "	4.50
10 "	"	.85	" "	" "	8.50
25 "	"	.80	" "	" "	20.00
50 "	"	.70	" "	" "	35.00

Bull-Meat Flour

The greatest blender, binder, flavoring and absorbent for Bologna, Frankforts and Pork Sausage.



Your money back if it is not the best article you have ever used. Bull-Meat Flour is a pure vegetable product which gives Bologna and Frankforts a rich juicy

flavor. It has four times greater absorbent qualities than any binder known. It adds to the meat's nutritive qualities and makes it more juicy, digestible and appetizing. Bull-Meat Flour does not dry and become lumpy, but it is absorbed through the meat and blends with it like fat, giving it a delicious flavor entirely its own. It keeps sausage and Frankforts plump and firm, and is the only thing that can be used to make them taste and look just right.

Bull-Meat Flour is a non-fermentative and sausage made with it will keep longer in any climate than without it. It makes a great improvement in Pork Sausage. It absorbs the grease and when the sausage is fried, it keeps all the juice and fat within the meat, creating a most delicious flavor. Pork Sausage made with it can be eaten and relished by people who cannot eat pork in any other way.

PRICE LIST

50	lb.	Drums.....	at \$0.05 1/2	per	lb.
100	lb.	Drums.....	.. .05	"	"
275	lb.	Drums.....	" .04	"	"

OZO Antiseptic Washing Compound

For washing and purifying barrels, vats and all kinds of packing house utensils and for all purposes where a washing and antiseptic agent is necessary. The most perfect cleansing agent known. This article will be found invaluable as a sterilizing agent in washing and cleansing all utensils used in packing houses, sausage kitchens and meat markets. It keeps everything in connection with meat clean and free from bad odors, and will consequently keep the meat fresh and sweet.

Barrels and vats in which hams, bacon and corned beef are cured become pickle-soaked and when the barrels and vats are refilled, this old brine oozes from the pores of the wood and affects the new brine which very often spoils the meat. Ozo destroys germs which adhere to barrels and vats, and therefore prevents the new brine from spoiling. It is absolutely harmless and keeps everything with which it comes in contact clean and sweet.

PRICE LIST

5 lb.	Boxes	-----	\$0.10	per lb.
10 "	Boxes	-----	.09	" "
25 "	Kegs	-----	.08	" "
50 "	Kegs	-----	.07½	" "
100 "	Kegs	-----	.07	" "
300 "	Bbls.	-----	.06	" "



Vacuum-Garlic

Garlic in a powder form made of the best selected Garlic. The garlic is first peeled, then

evaporated and dried in a vacuum, a process which saves all the free oil and natural flavor. It is then pulverized and prepared for use by our new and original method. Fresh Garlic contains a free acid causing the unpleasant aftertaste and offensive breath following its use.

We neutralize this acid, therefore Vacuum-Garlic is more healthful, more desirable in flavor and leaves the breath free from all disagreeable odors. Vacuum-Garlic has many advantages which cannot fail to increase the trade of all butchers and sausage manufacturers. It is an impalpable powder and therefore readily distributes its minute particles throughout the sausage. It is a non-fermentative and therefore prevents the formation of gases in the sausage. Vacuum-Garlic will keep in any climate without spoiling or deteriorating in value or strength of flavor. It is more economical than fresh Garlic and is always ready for immediate use.

PRICE LIST

1 lb. cans	\$.35	per	lb.
5 lb. cans	.30	"	"
10 lb. cans	.29	"	"
25 lb. cans	.28	"	"
50 lb. cans	.27	"	"
100 lb. kegs	.26	"	"
Barrel Lots,	.25	"	"

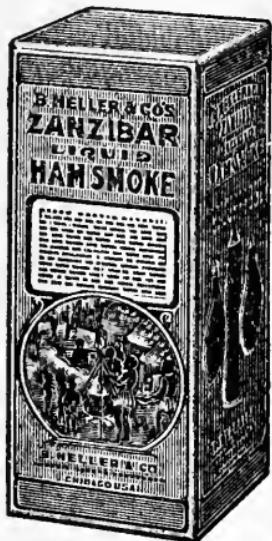


B. HELLER & CO., CHEMISTS, CHICAGO.

Zanzibar Liquid Ham Smoke

We manufacture Zanzibar Liquid Ham Smoke for smoking Hams without smoke-house or fire.

It imparts a delicious sweet smoke flavor which is more palatable and far better than can be secured by hickory smoke with a fire. Zanzibar-Liquid Ham Smoke produces a rich, natural smoke color, prevents mold and skippers, does not rub off and is easy to use. It should always be used for smoking Hams, Shoulders, Bacon, Dried Beef, Bologna, Fish, etc.



Zanzibar Liquid Ham Smoke is a pure vegetable preparation made by distillation, and it is

guaranteed that it does not contain anything except products manufactured from vegetable matter. It contains the same flavor as regular hickory and hard maple smoke, but differs entirely from hickory and maple smoke produced by fire in a smoke-house, or in any other way. All the objectionable properties of the smoke are entirely removed by our special process. With Zanzibar Liquid Ham Smoke the meat can be smoked and prepared in fifteen minutes; while smoking in a smoke-house sometimes requires from five to ten days. Zanzibar Liquid Ham Smoke will also deliciously flavor unsmoked boiled Hams and cooked Corned Beef by simply adding the Liquid Ham Smoke to the cooking water, and a fine smoke flavor can be given to Hams and Corned Beef by mixing the Liquid Ham Smoke with the brine in each tierce of meat when it is being packed for curing.

Quart Bottle - 75 cents

Lard Purifier

Purifies, Whitens, Hardens
and Preserves

LARD, TALLOW and STEARIN

The only Purifier made that whitens, hardens and preserves **Lard** and **Tallow**

without imparting any foreign taste or flavor to it. By its use more **Tallow** may be added to the **Lard**, as it removes the **Tallow** odor and neutralizes the free fatty acids, thereby preventing rancidity.

It hardens **Lard** so that the oil does not separate from the stearin during hot weather and does not destroy the natural grain and sweet lard flavor. We positively guarantee this **Lard** and **Tallow Purifier** to do all that we claim for it. This **Purifier** is the result of many years' practical experience in the refining of **Lard** and **Tallow**. Where used it will do the work every time and will give the best of satisfaction.



PRICE LIST

15 lb. Box	-----	\$0.33 per lb.
25 "	Box	.33 "
50 "	Box	.32½ "
100 "	Lots	.32 "
150 "	Lots	.31 "
500 "	Lots and over	.30 "

Hydrometers

Salometers

Many butchers are in the habit of guessing at the quantity of salt used for making the brine; others float an egg or potato to test its strength. All of these methods are very unsatisfactory for testing the strength of brine. One egg will swim in brine where other eggs will sink in it, as it all depends upon the age of the eggs. For the benefit of all of our customers, we sell a



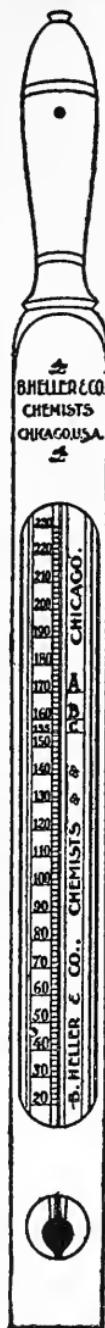
HYDROMETER

For Testing the Strength of Brine,

and our price is only \$0.50. These Hydrometers are all tested in our laboratory before shipment, and have our certificate upon them as to their correctness. It is as important to know that your Hydrometer is correct as it is to have one at all, and therefore, butchers should buy only absolutely correct ones. Testing brine with a Hydrometer is the only way to tell its strength accurately, and we advise all butchers to use one.

Price Each \$0.50

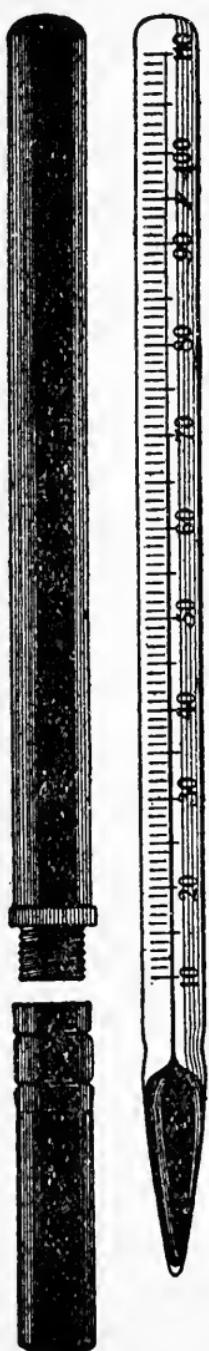
New Boiling THERMOMETER



We here illustrate a thermometer especially adapted for boiling Bologna, Frankforts, Hams, etc. These thermometers are well protected and are adapted in every way for their special purpose. The scale is in large plain figures, and the instrument complete is about eighteen inches long. It is very necessary for every man who cooks meats to use a thermometer, and when the temperature is kept the proper degree in boiling Bologna, Hams, etc., with the aid of this boiling thermometer, hundreds of dollars can be saved. In fact, all meats requiring boiling cannot be properly cooked except with the aid of a thermometer. We send a circular with each of these thermometers which gives full instructions in regard to boiling meats and sausage of all kinds.

Price Each,..... \$ 1.40
" Per Dozen,..... 15.00

Rubber Case Meat Testing Thermometer



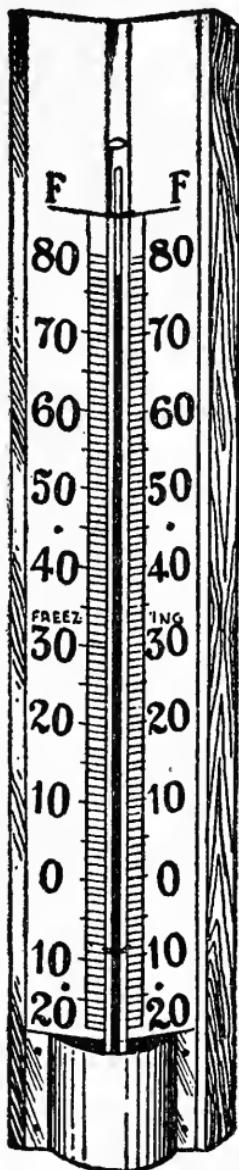
We illustrate here our Meat Testing Thermometer. It should be used by every curer of meat. It is always essential to take the temperature of the inner portion of hams, shoulders, etc., to see that they are properly chilled before curing. Very often a chill room is sufficiently cool, but a test of the meat will prove that it has not been chilled to the center. This thermometer is five inches long and has a plain scale to read, being graduated from 10 degrees to 110 degrees above zero. We also make this Thermometer mounted in a gold plated case with chain and pin attached with which to fasten it to the vest pocket so that it cannot drop out and break.

	Price Each
Rubber Case	-\$1.25
Gold Plated Case	-\$1.50

B. HELLER & CO., CHEMISTS, CHICAGO.

Cold Storage

THE THERMOMETER



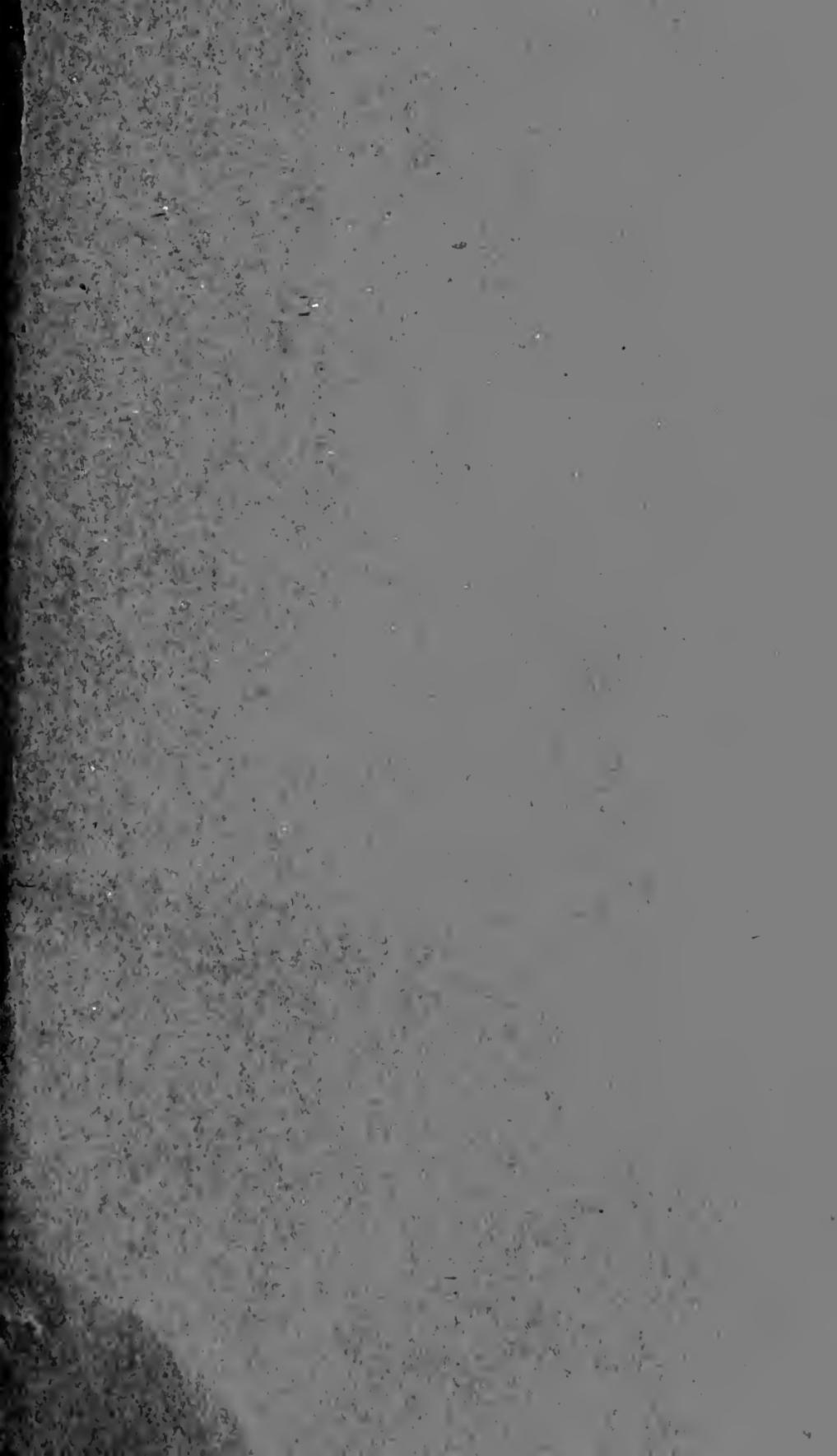
We illustrate here a thermometer especially adapted for packing house cellars. The tube has an angle protection and both the scale and figures have been made especially plain, heavy and large so that the degree of temperature can be seen at a distance.

This

THERMOMETER
Is Twelve Inches Long

and is graduated from 20 degrees below zero to 80 degrees above. It is a strong instrument and we guarantee that it will give perfect satisfaction.

Price Each.....\$1.40
Price Per Dozen.....15.00



LIBRARY OF CONGRESS



0 021 470 228 9